PRINTING EQUIPMENT ENGINEER

TECHNICAL PUBLICATION FOR PRODUCTION AN
CHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTR

Smoother Operation with the GOSS High Speed Anti-Friction Press

Greater net production—better printing at higher speeds are assured with the Goss High Speed Anti-Friction Press through its new low minimum of friction. 114 anti-friction bearings in each unit and intermediate folder insure highest precision and accuracy of results. There is greater smoothness, fewer web breaks, less time lost.

100% ball and roller bearing equipped, it is apparent that this press can attain and hold cylinder speeds of 416 R.P.M. with practically no vibration and a minimum of noise and wear. One of the outstanding features is the mounting of plate and blanket cylinders in pre-loaded Timken roller bearings. This eliminates all play, does away with stagger marks and prevents cylinder jumps.

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Investigate the Goss High Speed Anti-Friction Press in detail. Ask for full technical data and information at once.

THE GOSS PRINTING PRESS COMPANY

GOSS

PILSEN STATION, CHICAGO

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The Goss Printing Press Co. of England, Ltd., London, England

THE DAILY PANTAGRAPH

BLOOMINGTON, ILLINOIS

THE DAILY PANTAGRAPH has installed **The Stahi Junior Former** –to eliminate irregular casting levels, reduce the lag in time per mat in drying operations and effect improvement in **Quality Printing Results.** 56 other newspapers operating 57 **Stahi Junior Formers** can testify to the manifold advantages of this Revolutionary Machine.

STAHI NEWSPAPER SUPPLY COMPANY, INC.

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417 OREGONIAN BLDG.
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DUPLEX PRINTING PRESS COMPANY, Battle Creek, Michigan
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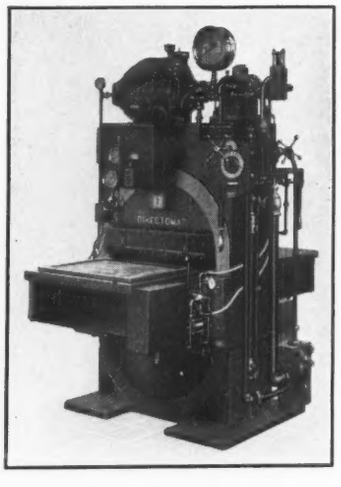
R. HOE & COMPANY, New York, Boston, Chicago, San Francisco

Foreign Agencies:

GOSS PRINTING PRESS COMPANY of London, England
A. M. CARNEIRO & COMPANY, New York
TORONTO TYPE FOUNDRY COMPANY, Ltd., Toronto, Montreal, Winnipeg, Canada



DIRECTOMAT PROGRESS

Real achievements never need tall talk. Progress can well tell its own story. So can efficiency. So can price.

It is real progress to build a Matrix Press that revolutionizes all previous conceptions of design and construction and sets a new standard of quality for mats.

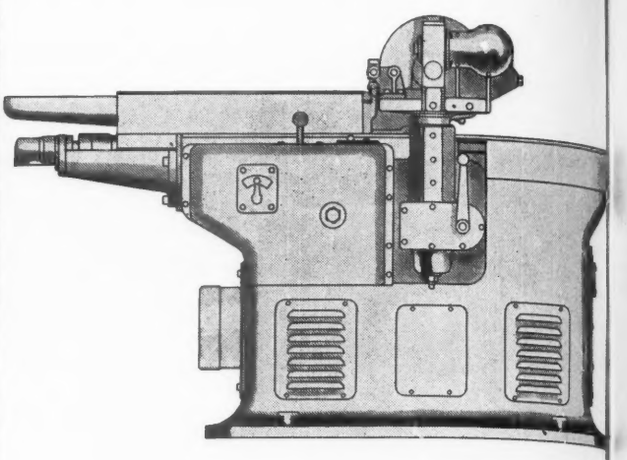
It is real progress to produce, as the DIRECTOMAT does, sharper and more uniform type matter, more detail and contrast in the halftones, and denser solids.

It is real progress to make more liberal use of full-kerning italics and other delicate type faces, as made possible by the type-saving DIRECTOMAT.

It is real progress to save, as DIRECTOMAT users do, about two-thirds of the cost of resetting of standing want ads.

It is real progress to double the speed of mat production, as the DIRECTOMAT does, without increase in floor space or operating cost.

How much actual evidence of progress can be laid alongside of DIRECTOMAT progress? Any comparison will be found overwhelmingly in favor of DIRECTOMAT. Everybody says it. 25 installations prove it. A demonstration will convince you, too.



THE LAKE ERIE TWO-IN-ONE MILLING MACHINE

is designed to fill a real need in the printing industry. Built with supreme precision to produce a finished plate of supreme precision at high speed and low cost, it sets an entirely new standard of performance.

The LAKE ERIE Two-in-One combines the functions of the roughing machine and the shaving machine. It mills stereotypes *in one operation* to the exact predetermined thickness. It mills first a *rough cut* from electrotypes, as they come from the casting pan, and then, after proofing, a *final finishing cut* to the exact thickness desired.

Direct-reading micrometer height adjustment for rotary cutter to obtain rapidly the desired plate thickness. ● Hydraulic feed for table movement, infinitely variable from 15″ to 90″ per minute, to suit varying depths of cut. Rapid return of table. ● Special pressure device chucks the plates firmly to the bed, assuring accuracy and preventing any buckling or stretching of the plates. ● Screw conveyor carries chips into a container beside the machine. ● Accuracy tolerance—within .001″. ● Plate thickness—from .063″ to type-high. ● Cutting range—from .0005″ to .100″.

Write for complete particulars.

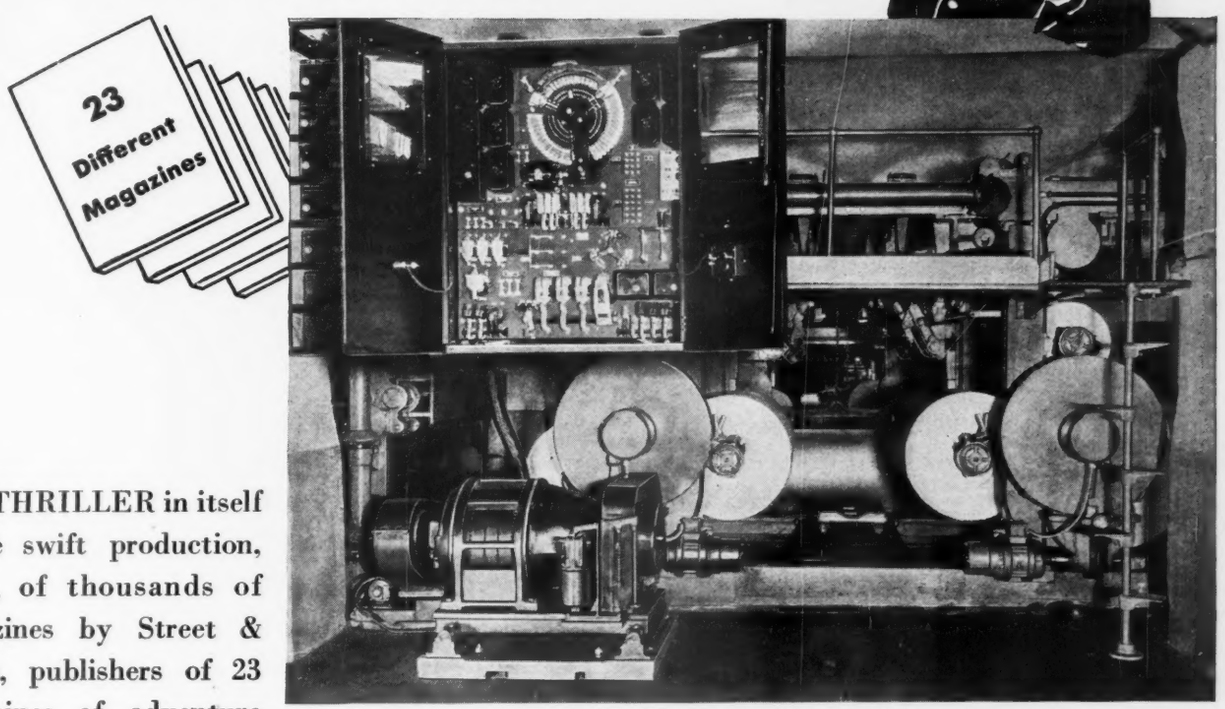
LAKE ERIE STEREOTYPE EQUIPMENT COMPANY

Division of Lake Erie Engineering Corp. **Kenmore Station, Buffalo, N. Y.**

2 NEW High-Speed Press Drives for Rapid-Fire Fiction

★ ★ ★

Street & Smith again selects G-E equipment for reliability and excellent performance



One of two new a-c drive equipments operating Hoe high-speed magazine presses in the plant of Street & Smith publications, Inc., New York City

A THRILLER in itself is the swift production, daily, of thousands of magazines by Street & Smith, publishers of 23 magazines of adventure and romance.

Satisfied by the reliable, high-speed performance of G-E equipment already installed, Street and Smith again selected G-E apparatus when installing two new Hoe magazine presses. Each of the new presses prints and folds 12,000 magazines per hour.

"*At present we have nine G-E units operating and giving entire satisfaction,*" says Frank Hatton, Superintendent of the Street & Smith organization. "*This speaks for itself.*"

It will pay you to specify General Electric equipment for your presses. G-E printing-equipment specialists co-operate with all press manufacturers. They will also assist you directly in getting reliable electric equipment for your plant. Refer to the nearest G-E office, or write to General Electric Company, Dept. 6B-21, Schenectady, N. Y.

020-236

GENERAL ELECTRIC

5

FROM

Here's what the publisher of one of the largest Texas dailies has to say about rollers:

> *"Our presses are equipped with Goodyear Rubber Rollers installed five years ago. The only thing that has been done to them since is to polish the surface which, of course, all rollers require. They have given complete satisfaction!"*

Goodyear Rubber Ink Rollers require less attention, *fewer adjustments,* because they are not affected by temperature variations. They last longer because they are extremely oil-resistant and take a good regrind. They save work because they do not require washing, and can be used with all color inks. The result is sharper, cleaner printing at less expense — *as every user testifies!*

Let us tell you more about these superior rollers and other press-proved Goodyear supplies on which more and more leading papers are being printed every year. Write Goodyear, Akron, Ohio, or Los Angeles, California. *Branches in all principal cities.*

MORE NEWSPAPERS ARE PRINTED ON GOODYEAR RUBBER UNDERPACKING THAN ON ANY OTHER KIND

APRIL 1936
Volume 52—No. 1

PRINTING EQUIPMENT ENGINEER

Trade-Mark Registered U. S. Pat. Office

A Technical Publication for the Mechanical Executive Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Field

Established 1910

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Member of Controlled Circulation Audit

Published Monthly

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Published by Don Will • Edited by Mac Sinclair

WITH Matrix Contrast Service you can increase the total output of your line composing machines *more than 3%*.

The Black and White process saves money by preventing errors. No new equipment is needed, no floor space. There's nothing extra for anybody to do—and no additional costs other than a moderate service charge.

FIGURE out what 3% of your machine costs amount to. You will quickly see that Matrix Contrast Service would far more than pay for itself. It can be installed on a "pay-as-you-profit" basis.

MATRIX CONTRAST *prevents* ERRORS

WRITE for figures showing savings made in plants of the same size as yours. Please state how many line composing machines you are using.

MATRIX CONTRAST CORPORATION

EMPIRE STATE BUILDING • NEW YORK

SOLE LICENSEES OF THE PERCY L. HILL MATRIX CONTRAST PATENTS NOS. 1,466,437 AND 1,796,023

A.N.P.A. Conference in Chicago

Any manufacturer or dealer in newspaper mechanical equipment or supplies may have one representative attend the sessions of the A.N.P.A. Mechanical Conference to be held at the Palmer House, Chicago, Monday, Tuesday and Wednesday, May 25, 26, and 27.

Each manufacturer or supply company wishing to be represented at the Conference should apply to the A.N.P.A. Mechanical Department at 370 Lexington Ave., New York, New York, for a card of admission. This card should be exchanged at the Conference registration desk at the Palmer House for a badge to be issued to the company named. The badge will admit any representative of that company to the sessions as an observer. In case the chairman wishes, the representative may be invited to speak. Otherwise the meeting is closed to member newspaper representatives of the A.N.P.A.

As was announced by Manager W. E. Wines of the Mechanical Department, arrangements have been made for equipment and supplies exhibits. Exhibitors must make space arrangements with the Palmer House direct. Rentals vary with the size of the booth but the charges are said to be moderate. The Exhibition Hall is equipped with water, gas, compressed air, including d.c. and a.c. current of several voltages. A large freight elevator may be used to lift heavy machinery.

Public Printer Speaks in Cleveland

Friday night, April 3, was an extraordinary night for the Cleveland Club of Printing House Craftsmen, inasmuch as Public Printer A. E. Giegengack, former president of the International Association of Printing House Craftsmen, spoke before the Cleveland Club and invited guests. He discussed production and punctuated his talk with incidents relative to the human element in his work at the Government Printing Office.

At this meeting were present several prominent men in the Craftsmen movement, as follows: Philip J. McAteer, Educational Chairman, Boston Club; J. Gus Liebenow, Contributing Editor, Graphic Arts Monthly; *A. V. Fitzgerald, member Graphic Arts Research Bureau, Milwaukee; Frank Wagner, Portland, Me., paper and ink expert of the S. D. Warren Paper Company.*

The program was under the direction of J. Homer Winkler, who is Educational Chairman of the Cleveland Club.

On Saturday, April 4, Hon. A. E. Giegengack and Messrs. McAteer, Liebenow, Fitzgerald, together with John B. Curry, Boston, International President, and Oliver Watson, Toronto, former International President, held meetings to formulate plans for the new Graphic Arts Research Bureau which will be presented at the Minneapolis convention in August.

Floods

Cause Extraordinary Reconditioning Work in Plant of Pittsburgh Press

By Staff Writer

THE damage caused by the recent floods in printing plants has been described graphically in many publications. To the printing plant mechanical executive, however, the greatest interest centers about the means employed to restore flooded equipment to operating condition. One of the many newspaper plants put out of commission was the Pittsburgh *Press*. At the crest of the flood on Wednesday, March 18, water rose to a height of 5 ft. 4 in. from the pressroom floor level and 16 ft. measured from the pit floor level. The next day (Thursday) the water receded.

Jack Parks of the Cline Electric Mfg. Co., Chicago; Jesse Sturm, pressroom superintendent of the *Press*, and Walter Ogden, who serves in a pressroom advisory capacity for the Scripps Newspapers, had a difficult task before them to restore the mechanical and electrical equipment to operating condition. According to Messrs. Sturm and Ogden, Jack Parks really took charge of the entire rehabilitation operation. Five hundred men, working two shifts, were employed to restore the plant to normal condition.

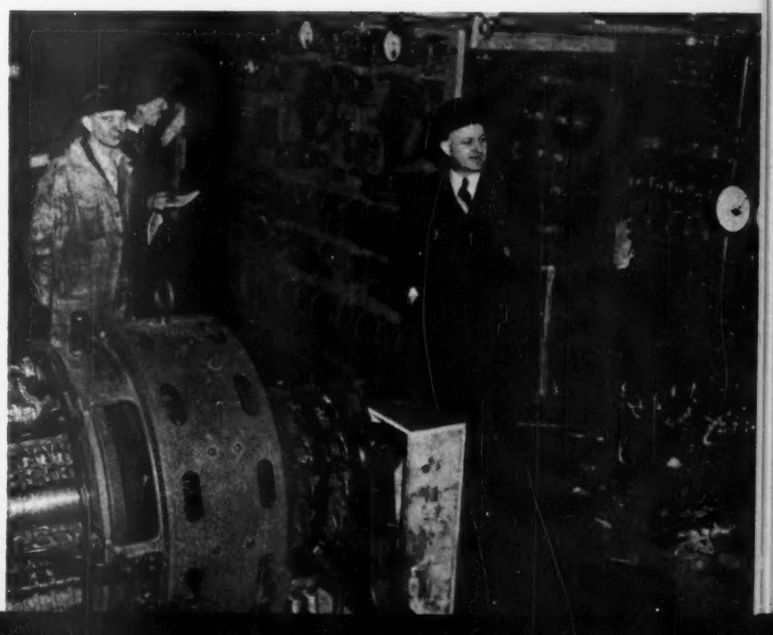
On Thursday night, March 19, restoration work was started on the 32 black-and-white units and the color press. Water was pumped from the pressroom by three fire engines and a locomotive on a track at the side of the building. By Friday all of the water had been pumped out. The problem remained as to how 4 in. of mud should be removed from the floor and the removal of a muddy residue which covered the printing presses. A considerable quantity of water-soaked newsprint also had to be removed. The mud and damaged newsprint were removed by the old reliable pick-crowbar-shovel-and-wheelbarrow method.

The presses were washed down with a fire hose from a fire engine. After the preliminary washing, the press parts which included bearings, gears and cylinders, but not including the ink rollers, were blown out with 2 in. hose under 200 lbs. of steam furnished by a locomotive on the siding.

After the flood residue had been washed out of the presses, all grease-lubricated bearings were shot with new grease under 150 lbs. pressure. All other bearings were blown out with penetrating oil. All blankets were changed. The rollers were rubber and canvas-

(*Continued on Page 36*)

Jack Parks of the Cline Electric Mfg. Co., who responded to an emergency call at the time of the flood, and two of his assistants in the press control room of the Pittsburgh Press. *All of the electrical control equipment was entirely submerged by the water. In addition to the press control board is shown part of the emergency equipment set up to operate the presses until regular equipment could be restored to normal condition.*



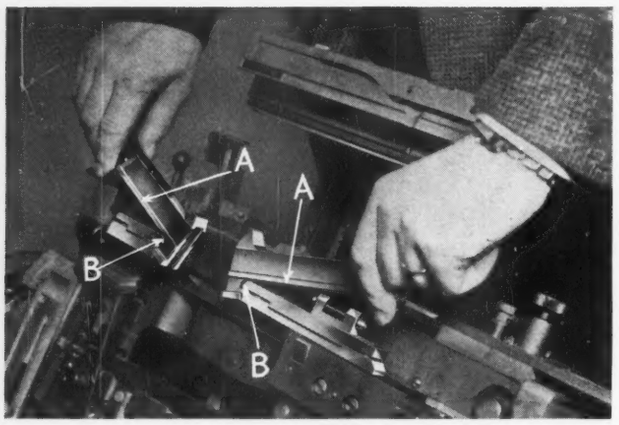


Fig. 1.—Inside view of Intertype vise mechanism. Here is shown a pair of vice jaws being detached from a new jaw mounting. Another pair of jaws may be substituted for the ones being removed. At A *is shown a rib on each vise jaw. These ribs serve to close special standard-depth molds at a casting level below normal by engagement in a frontwise direction, but below the level of the mold face against which the matrices engage.*

Low Quad

Feature With Automatic Double Indention Announced by Intertype

By L. W. Willis*

LOW-QUAD line-slug casting has long been recognized as desirable because of its advantages to the printer, but it has not been accomplished successfully for general purposes until recently. To be of highest utility, we feel the low-slug feature and the quadding mechanism must coordinate with the machine as a whole to widen its flexibility without disturbing normal functions or operating efficiency. Low blank slugs, of course, could be cast in low-depth molds especially suited to this purpose. For standard depth molds it has been proposed to use a casting block with a projecting rib intended to fit between the upper and lower walls of the casting cavity or to insert in the line by hand special low-quad matrices with a similar projection. However, due to natural variations in alignment of these forms of projections with the casting walls of the mold, their cooperation with the mold to seal it against escape of metal when casting is too uncertain, if not impossible to effect in practice.

Automatic low-slug quadding is a development recently announced by Intertype Corporation and embodies features which make possible the casting of low blank slugs and low shoulders automatically on type-bearing slugs, using standard matrices and standard depth molds. The low shoulder can be cast to varying depths according to the purpose for which they are required so that the time and expense of sawing slugs to fit around cuts inserted in the column is eliminated. Either zinc etchings or photoengravings can be mounted directly on the low-quad surfaces. When printing directly from the slugs, the low-quad shoulders also prevent printing press rollers from inking the blank portions of slugs and thus avoid smudging the paper.

The method developed by Intertype for accomplishing automatic low-quad casting involves the use of vise jaws with specially formed ribs, *A*, shown in Fig. 1. These ribs serve to close special standard-depth molds at a casting level below normal by engagement in a frontwise direction, but below the level of the mold face against which the matrices engage. By this new arrangement of frontwise engagement the vertical faces of the vise jaw ribs form a metal-tight seal at the front of the mold and produce a smooth low-quad surface below the printing characters on the slugs.

Vise jaws with ribs of different vertical widths are needed to cover the range of point sizes from 5 pt. slugs upward through the larger sizes cast in recessed molds. A given rib size can be used for several point sizes before it becomes necessary to exchange the vise jaws to provide a rib of greater width. All four molds on the disk may be used for low-quadding, or regular and low-quad molds may be used together on the same machine. When it is desired to use the regular molds without the low-quad feature it is necessary to exchange the vise jaws for another pair having the usual flat casting faces.

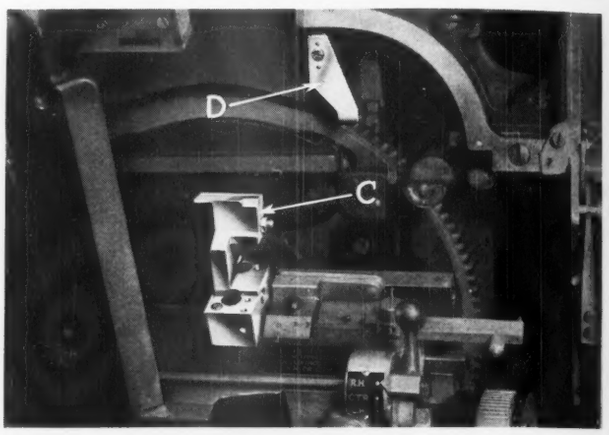


Fig. 2.—Section of Intertype vise in open position. At C *is shown a hinged first elevator vise jaw support which is swung upwardly when the operator desires to change vise jaws as explained in Fig. 1. At* D *is shown a cam block which will throw down the support C automatically in case the operator fails to return the support to normal before the mold disk advances to casting position.*

Changing the vise jaws to provide ribs of another size is accomplished by pulling upward on the outer ends of the jaws to detach them from a self-acting retaining bolt and by swinging them about the fulcrum bearing *B*

(*Continued on Page 46*)

Most Interesting Magazine

Printing Equipment Engineer *is the most interesting magazine I receive and is just the thing for the executive who wants to keep abreast of the times in the mechanical and production ends of the printing business. Your Reference Number is referred to very often.*

Walter R. Wakefield, Supt.,
Gordon-Taylor, Inc.,
Cambridge, Mass.

*Patent and Research Engineer, Intertype Corporation, Brooklyn, New York.

The building for the Bloomington (Ill.) Pantagraph *is of steel and concrete with Indiana limestone facing. It is a typical newspaper building erected especially for newspaper production. Like many other modern newspaper structures, provision has been made for installation of a general air conditioning system. At the present time, the pressroom is air conditioned—humidified with live steam and is held to a constant temperature by humidistats.*

James William Thomas of Cleveland is the Architect.

Pantagraph

Of Bloomington (Ill.) Now in New Home Suited to Requirements

By Russell B. Miller*

THE *Pantagraph* staff, both executive and mechanical, is glad indeed to be in its completed new home. It isn't a particularly pleasant thing to work during an excessively severe winter in a partially completed structure with one or more temporary side walls. At times, the temperature in our pressroom could not be raised above 40 deg.

The new two-story home of the Bloomington (Ill.) *Pantagraph* is of steel and concrete fireproof construction throughout. The facing is of Indiana limestone. Live steam which is used for heating purposes is supplied by the Illinois Power and Light Corporation.

Above:
Loring C. Merwin, Publisher, Bloomington (Ill.) Pantagraph.

Below:
Joseph M. Bunting, General Manager, Bloomington (Ill.) Pantagraph.

The first floor of the new building is occupied by the business office, offices of the publisher, general manager, business manager, advertising department, mimeograph room, several office store rooms, carrier collection and mailing rooms.

On the mezzanine floor are located conference rooms, the auditorium and women's locker and toilet rooms. The auditorium may be used for staff and civic meetings. A stereopticon room for projecting late bulletins and election returns on a frosted glass bulletin board placed in a window is also on this floor.

In the second floor will be found the editorial rooms, offices of the managing editor, the composing room, proof and dispatch rooms and the mechanical superintendent's office.

A pent house is located on the roof. Elevator operating equipment and ventilating fans are contained within the pent house. Provision has been made for future

**Russell B. Miller, Mechanical Superintendent, Bloomington (Ill.)* Pantagraph.

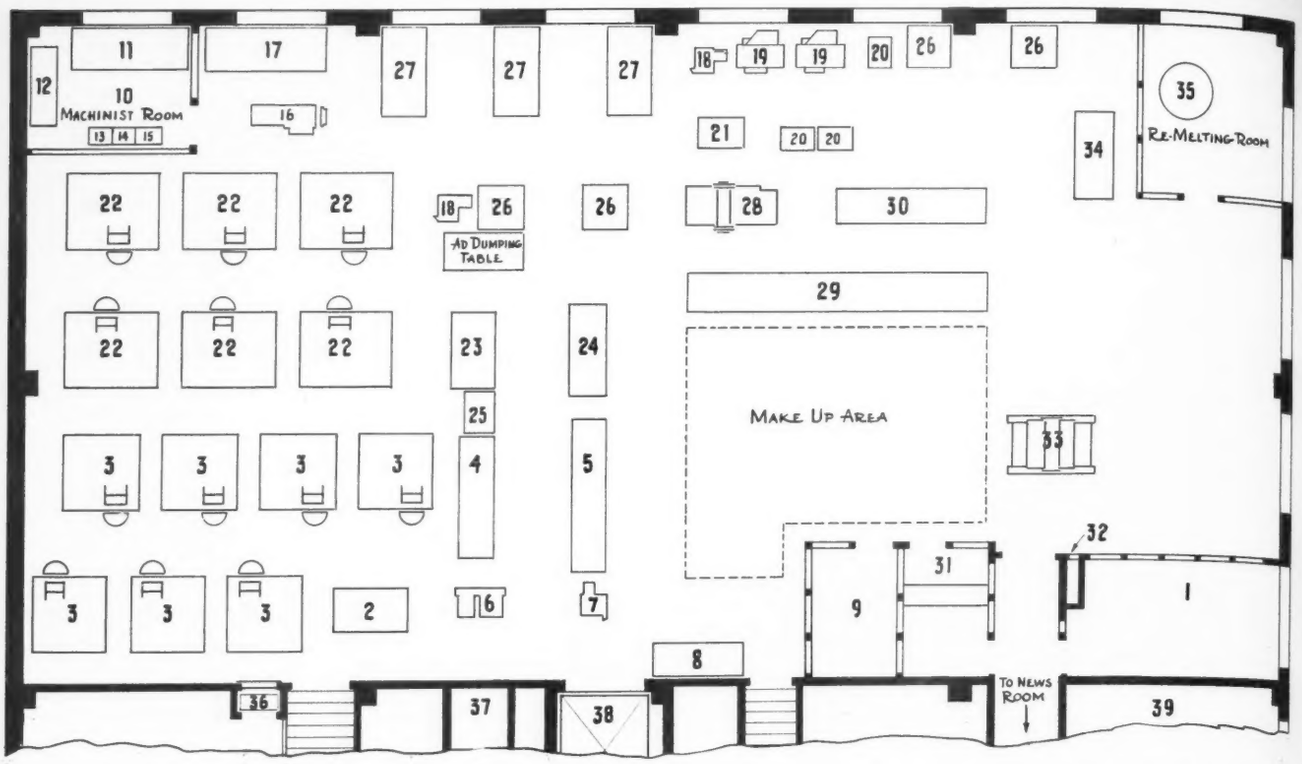
installation of general air conditioning equipment throughout the building.

The stereotype foundry, pressroom, machine shop and paper storage occupy the basement space.

Floors of Various Kinds

Flooring throughout the building is of various kinds suited to the purpose for which it is to be used. Asphalt tile floors are used in the auditorium, business office, advertising department and the editorial rooms. The

(*Continued on Page 12*)



COMPOSING ROOM FLOOR PLAN AND EQUIPMENT LAYOUT OF THE BLOOMINGTON, (ILL.) *Pantagraph*

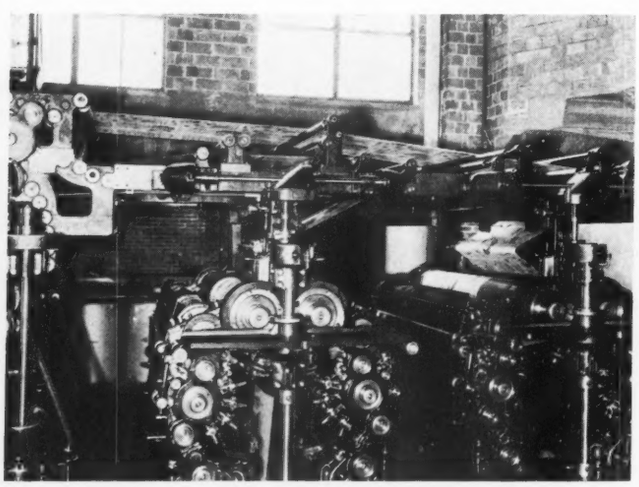
1 *Office of the Mechanical Superintendent*
2 *News Copy Desk*
3 *News Machines (Linotypes)*
4 *News Dumping Table*
5 *News Correcting and Assembling Table*
6 *Proof Press*
7 *TrimOsaw*
8 *6-ft. Storage Table*
9 *Glass Enclosed Proof Room*
10 *Composing Room Machinist*
11 *Machinist's Bench*
12 *Lathe*
13 *Buffer*
14 *Grinder*
15 *Drill Press*
16 *Monotype Strip Caster*
17 *Strip Material Cabinet*
18 *Miller Saw (2)*
19 *Ludlow Machines*
20 *Ludlow Cabinets (3)*
21 *Base Cabinets*
22 *Ad Machines (Linotypes)*
23 *Ad Copy Desk*
24 *Cuts, Flat Casts and Storage Table*
25 *Signature Cabinet*
26 *Type Cabinets*
27 *Double Type Cabinets*
28 *Vandercook Proof Press*
29 *Ad Assembling and Storage Table*
30 *Work Table and Makeup*
31 *Dispatch Room*
32 *Mat Chute to Stereotype Foundry*
33 *Goss Matrix Rolling Machine*
34 *Auxiliary Mat Roller*
35 *Remelting Room (Monarch Furnace)*
36 *Ad Copy Dumb Waiter*
37 *Toilet*
38 *Freight Elevator*
39 *Telegraph Room*

composing room is floored with creosote wood block. The basement, mailing room and engraving rooms are floored with concrete.

ENGRAVING DEPARTMENT

The engraving department is located on the second floor off the editorial and composing rooms. Its floor space is 25 ft. by 70 ft. which includes the camera room, dark room, etching room and the photographic studio. The principal equipment in the engraving room consists of a Robertson 24 in. by 24 in. camera with Goerz lens; Gelb twin arc lamp; 60- and 75-line engraving screens; a dentist's drill for marking identifications on cuts, a plate whirler, plate burner, etching machine, Goss router, square cutter or guillotine and a Delta saw.

The engraving room is equipped with a copy chute which connects it to the advertising department. This chute also is used by the composing room in receiving advertising copy, mats and cuts.



Section of Bloomington (Ill.) Pantagraph *pressroom showing part of the Goss Octuple Unit-Type Press with two folders, the paper being fed from both ends of the press.*

COMPOSING ROOM

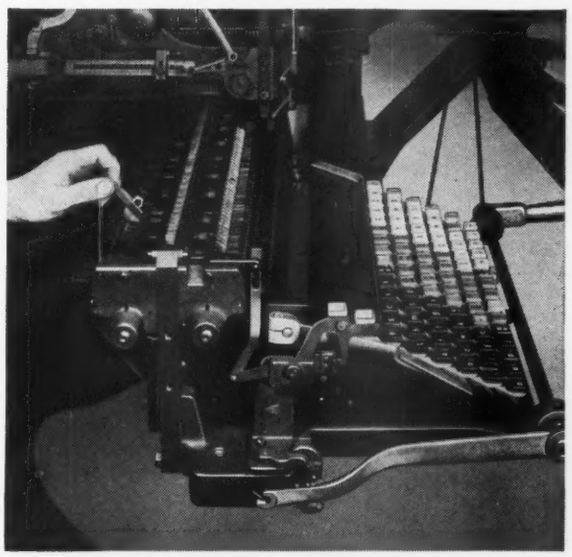
The composing room is located on the second floor, extending across the width of the building which is 85 ft. Its depth is 45 ft. Here the Linotypes—news machines on one side and the ad machines on the other are arranged so that news and ad composition work to the center of the room in which is located the makeup department.

Advertising copy, cuts and mats are received in the composing room by means of a dumb waiter running from the advertising department. News copy is deposited on the copy desk from a pneumatic tube connected with a universal desk in the editorial room.

The office of the mechanical superintendent is located on the composing room floor level. A sound-proof, glass-enclosed proofroom occupies a space along the

(Continued on Page 16)

Just Swing It Out



TRADE LINOTYPE MARK

The Linotype swinging keyboard makes any keyboard part just as accessible as though the keyboard were removed to a work bench. It swings right out in ten seconds with every part in full view for inspection, cleaning or servicing. Any cam in either the front or back row can be instantly removed without the use of any tool.

MERGENTHALER LINOTYPE COMPANY

BROOKLYN, NEW YORK

SAN FRANCISCO · CHICAGO · NEW ORLEANS

CANADIAN LINOTYPE, LIMITED, TORONTO, CANADA

Representatives in the Principal Cities of the World

FIFTY YEARS OF ACHIEVEMENT 1886 1936 LINOTYPE

LINOTYPE AND A-P-L CENTURY AND SCOTCH

Graphic Arts

Technical Conference Will Discuss Important Topics in Washington

The Graphic Arts Technical Conference will be held in Washington, D. C., on May 11, 12, 13 at the Wardman Park Hotel under the joint auspices of the Graphic Arts Research Bureau and the Graphic Arts Division of The American Society of Mechanical Engineers. Other organizations, including the Craftsmen and the local Graphic Arts Clubs, are cooperating.

Hon. A. E. Giegengack, U. S. Public Printer, is chairman of the Committee on Arrangements. Those planning the technical program are: Wm. G. Dodge, Edward Pierce Hulse, Thomas E. Dalton, Wm. C. Glass, Edward Epstean, Arthur C. Jewett and V. Winfield Challenger.

The program of the meeting will consist of four technical symposiums, a dinner and tours to the Government Printing Office and other government bureaus.

The first technical session or symposium will consist of a discussion of printing metals and is being organized by J. Homer Winkler of the Ace Electrotype Company, Cleveland.

The second symposium will be on the relation of paper to printing. It is being organized by Frederic C. Clark, of Skinner and Sherman, Boston.

The third symposium will be on application and evaluation of the three printing processes—Relief or letter press, planography or lithography, intaglio or gravure. This is being organized by Thomas E. Dalton, production engineer of Hearst Magazines, Inc. The merits, scope and limitations of these processes will be analyzed, the object being to guide the printer in expanding his facilities and the buyer in selecting the best process to fit the job.

The final session will include a discussion on specialization versus general printing. It will be led by a leading management engineer, who will discuss principles as they have been applied to other industries. This will be followed by a discussion on photomechanical progress and several contributed papers. This session is being arranged by W. G. Dodge of the New York Daily *News* and Wm. C. Glass of the U.P.M.-Kidder Press Company.

The Conference and its discussions will be open to all interested in the problems of the Graphic Arts.

Plate Graining

By Adam Henry Reiser

Problem—*I am trying to obtain some information concerning the grain on zinc offset plates. We get a fair grain with No. 120 sand—deep but a little coarse; No. 150 sand produces a fine surface grain; Nos. 80 and 100 sands produce a good deep grain but it is too coarse for our use. If you will let me have some information as to where I could obtain a deep, fine grain, I will be very much obliged.—M.F.*

Ans.—A well-grained plate is recognized by the trained lithographer by the evenness of the texture of the surface disturbances or grain. An appearance of softness and regularity is presented by the surface of such a plate. Scratches, digs, breaks in the contour of "peaks and valleys" are absent in the well-grained plate.

Of course, such a term as "well grained plate" is only relative. What may be well grained to one person is just another headache to someone else. One type of grain will not function equally well on the varied types of work produced by lithography. Lithographic houses use three or more kinds of grain to satisfy their requirements.

It is customary to refer to these grains by number, the grain taking its number from the flint used to finish the graining action. These flint numbers run from 0000 to 1, the last-named being the coarsest, while the first is the finest. Numbers such as you refer to are strangers to the old-line lithographer. They may be used, but probably convey less than the graduated set mentioned above.

To be absolutely fair, it must be admitted that the two designatory groups fail to depict clearly any definite picture of a grain. Even the flint varies, so that with everything else being equal—time of graining, speed of grainer, size and kind of marbles, flint application periods, etc.—the product of what should be two equal batches of flint will vary. Lithography is unfortunate in that there are few absolutely scientific measuring sticks. This point was brought out recently in one of my articles in the Lithographers' *Journal*.

The subject of plate graining is of immense importance to the lithographer for it really lies at the base of the entire process. Trained workers produce the type of plate that is required. Any lithographic supply house will furnish sample grains. Experience will then dictate the proper grain for the work at hand. Three types of grain would cover hand art work, hand transfers and photo-lith work, ranging from coarse to medium and fine for the last. After the grain has been determined workable, the grainer or supply house will furnish plates to match this standard.

We are sending you names and addresses of firms who do plate graining.

Appointed Sales Manager

It has been announced by F. W. Billker, President of the Milwaukee Saw Trimmer Corporation, that B. F. Adams has been appointed sales manager of the company, effective April 1. Mr. Adams was formerly connected with the Mergenthaler Linotype Company and is well known throughout the Central West.

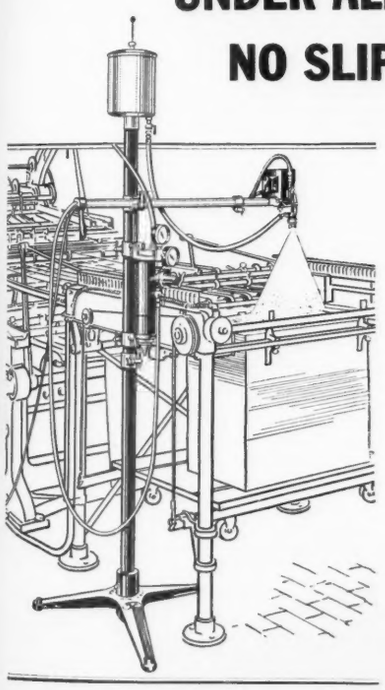
"BeeEffAye," as Adams is universally known, will assume the duties brought to a sudden end some time ago by the death of Secretary Sam Greenfield.

B. F. (Frank) Adams who is now Sales Manager of the Milwaukee Saw Trimmer Corporation, Milwaukee, Wis.

No more RACKING WINDING TRAYING *when you use* THIS GUN!

Eliminates PICKING UNDER ALL CONDITIONS

NO SLIPSHEETING • NO INK DOCTORING



ATF NON-OFFSET GUN set up for Kelly Press. Telescopic stand and arm enable you to raise and lower gun, swing and tilt it in any direction so as to fit another press.

No more wasted time, labor and money while running heavy forms . . . the NEW ATF NON-OFFSET GUN ends forever old-fashioned precautions against picking, offsetting, smudging. This method has proved effective in countless hours of use under all conditions. It is now available for the FIRST time in a low-priced, portable unit, cleaner and more efficient than any other.

ALLOWS FULL-HEIGHT LIFTS ON SKIDS!

Imagine the savings and increased production! The ATF NON-OFFSET GUN gives positive, sure freedom from expensive racking, winding, traying without slowing up the press, running thin or ink doctoring. It allows you to run full color and more vivid colors, metallic inks, varnish . . . with lifts on the delivery table as high as the press will permit.

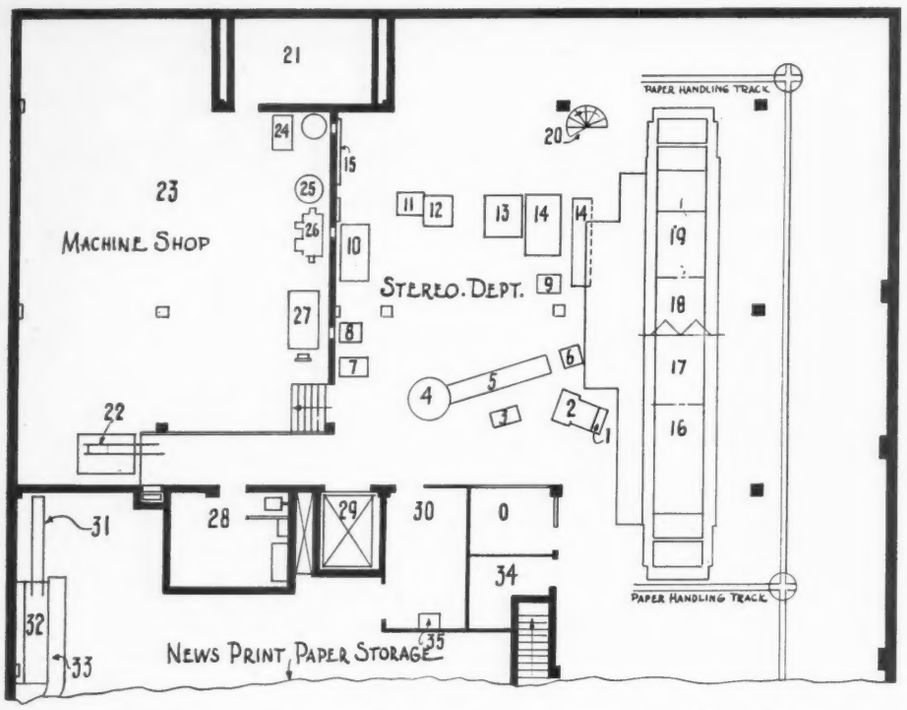
The ATF GUN operates automatically. As a sheet reaches the delivery pile, the GUN delivers a quick puff that forms a protective cushion of clean, dry powder on the freshly printed surface. This prevents abrasion or adhesion between the top sheet and the next sheet delivered. *Slipsheets shot from guns!* The ATF NON-OFFSET MIX does not leave an objectionable deposit on sheet or machinery. It is invisible to the naked eye, and absolutely harmless. It positively will NOT affect overprinting or subsequent colors. The entire unit is compact, simple to operate and adjust. Fits any make or size of press. Can easily be moved wherever needed.

Types used: Bernhard Gothics, Franklin Gothics and Keynote

Your ATF Branch has all the interesting details, mechanical specifications and the surprisingly LOW PRICE of the ATF NON-OFFSET GUN. Ask your ATF Salesman!

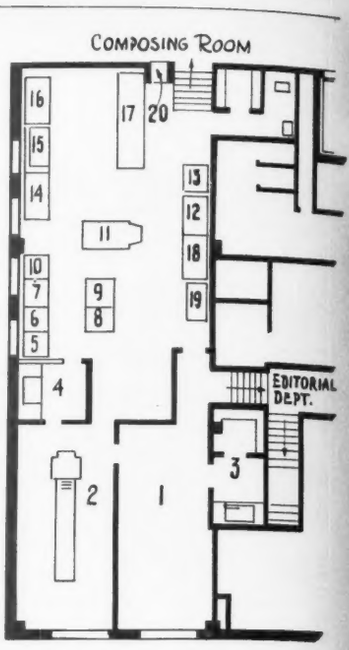
AMERICAN TYPE FOUNDERS

Branches and Selling Agents in Twenty-five Cities



STEREOTYPE FOUNDRY AND PRESSROOM LAYOUT IN NEW PLANT OF BLOOMINGTON, (ILL.) *Pantagraph*

0 *Pressroom Foreman's Office*
1 *Mat Chute From Composing Room*
2 *Packing Table*
3 *Stahl Autoformer*
4 *Stereotype Pot*
5 *Pony AutoPlate*
6 *Finishing Plate*
7 *Flat Casting*
8 *Flat Casting*
9 *Curve Casting*
10 *Shaver*
11 *Saw*
12 *Trimmer*
13 *Router*
14 *Grids for Press Control*
15 *Main Switchboard*
16 *No. 1 Goss Press Unit*
17 *No. 2 Goss Press Unit*
18 *No. 3 Goss Press Unit*
19 *No. 3 Goss Press Unit*
20 *Spiral stairway to Mailing Room*
21 *Transformer Room*
22 *Ink Tank and Drain*
23 *Machine Shop*
24 *Air Compressor and Tank*
25 *Sump*
26 *Vacuum Pump*
27 *Hot Water Tank and Heater*
28 *Dressing Room and Toilet*
29 *Freight Elevator*
30 *Paper Baler*
31 *Newsprint Delivery From Trucking Space by Chute*
32 *Receiving Table*
33 *Elevated Track for Paper Handling*
34 *Storage*
35 *Waste Paper Chute From All Floors*



ENGRAVING ROOM LAYOUT, BLOOMINGTON (ILL.) *Pantagraph*

1 *Studio*
2 *Camera Room (Robertson Camera)*
3 *Dark Room*
4 *Dark Room*
5 *Cutting Table*
6 *Acid Bath*
7 *Sink*
8 *Hot Box*
9 *Coating Table*
10 *Bench*
11 *Printing Frame*
12 *Shears*
13 *Saw*
14 *Finishing Bench*
15 *Sink*
16 *Etching Machine*
17 *Powdering Stove and Cooler*
18 *Goss Router*
19 *Proof Press*
20 *Copy Dumbwaiter to Ad Dept. and Press Room*

Pantagraph

(*Continued from Page 12*)

south wall, as well as a dispatch room through which passes all advertising copy, cuts and proofs. The composing machinist's room is located in one corner of the composing department as shown on the diagram of the second floor layout.

The ad alley occupies the north section of the composing room. Six Linotypes are used for advertising composition. Here are located ten combination type cabinets and makeup tables arranged along the windows. Two Miller saw-trimmers are used to cut material. Two Ludlows and five Ludlow cabinets are used in setting heads and display advertising. A Monotype furnishes strip material and dashes. A cabinet near the Monotype contains a reserve supply of strip material. All ads are proofed on a Vandercook page proof press.

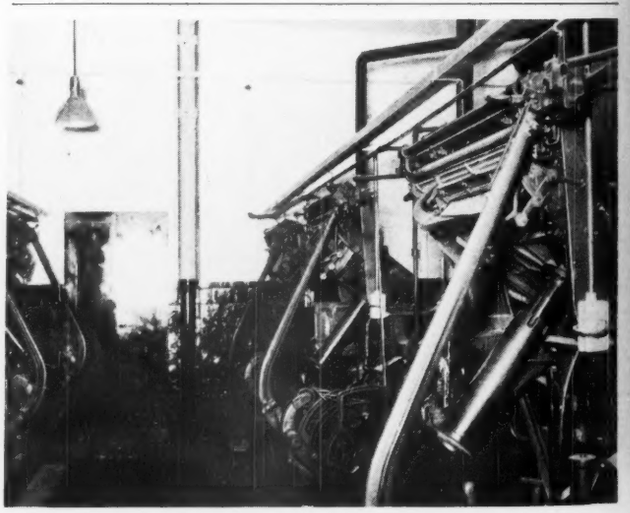
A Monarch furnace in which gas is the source of heat, is used for remelting purposes. Located nearby is a furnace for re-running dross.

The composing room machinist's room is equipped with a work bench, a lathe, buffer, grinder and a drill press in addition to parts and matrix storage.

STEREOTYPE DEPARTMENT

The molding and padding section of the stereotype department occupies a portion of the composing room floor level. A Goss Heavy-Duty Mat Roller is used regularly for molding, although an auxiliary roller is

(*Continued on Page 39*)



View of alley between Linotypes in new plant of Bloomington (Ill.) Pantagraph, *showing wiring conduit trough for power and light lines. Just below the trough is suspended the gas line with feeder pipes running to each metal pot. All wiring and piping is overhead to avoid tearing up the floor in case it is necessary to rearrange the machine layout at some future time, as well as to avoid wiring trouble in the junction boxes.*

ASK AN ATF MAN FOR A DEMONSTRATION

AMPLE WORK SPACE ON THE BIG TABLE 20x28 INCHES
28"
20"
A GIANT CHIP BOX TO KEEP THE FLOOR CLEAN
$295
Equipped with ¾ h. p. Motor
$320
Equipped for Heavy Work
Prices f. o. b., Elizabeth, N. J.
NO ACCIDENTS WITH THE MOVING PARTS SAFELY HOUSED
A BIG SAW WITH FOUR LEGS AND A WIDE BASE— DOESN'T WOBBLE

BRANCHES AND SELLING AGENTS IN TWENTY-FIVE CITIES

AMERICAN TYPE FOUNDERS

First pages of the daily newspapers winning honorable mention among 127 daily newspapers of 50,000 circulation and over entered in the Sixth Exhibition of Newspaper Typography conducted by the Ayer Galleries in Philadelphia. They are New York Hearld Tribune, *which won first place; New York* Times, *second honorable mention, and Washington* Post, *third honorable mention. The New York* Hearld Tribune *also was awarded the Francis Wayland Ayer Cup, sweepstakes prize for the first paper among the 1,445 enteries in the three circulation divisions.*

Ayer Cup

Goes Into Permanent Possession of New York "Herald Tribune"

By Staff Writer

THE New York *Herald Tribune* on April 5 became the permanent possessor of the Francis Wayland Ayer Cup awarded for typographical excellence by N. W. Ayer & Son, Inc., Philadelphia advertising agency, in its sixth annual Exhibition of Newspaper Typography. The cup was offered the daily paper in the United States winning it three times. It had already been awarded the *Herald Tribune* in 1931 and 1934. The New York *Times* received it in 1933 and 1935 and the Hartford *Courant* in 1932.

The *Herald Tribune* was selected this year in competition with 1,444 newspapers representing 80 per cent of all the daily English language papers in the United States. The judges were Sir Willmott Lewis, Washington correspondent of the London *Times;* Professor Kenneth E. Olson, chairman of the Department of Journalism of Rutgers University; and John Clyde Oswald, of New York, author, printer and former owner and publisher of the *American Printer*.

In making this award the judges took into consideration typography, layout, makeup, presswork and general typographical excellence.

Besides receiving the cup, the *Herald Tribune* was awarded first place among 127 newspapers of more than 50,000 circulation. Second place in this circulation division went to the New York *Times* which was a close competitor to the winner, and third place to the Washington *Post*. Papers in this division surviving to the final elimination were the Christian Science *Monitor*, Richmond *Times-Dispatch*, Newark Evening *News*, Dallas Morning *News*, Baltimore *Sun*, Detroit *News*, Minneapolis *Journal*, Nashville *Banner* and Milwaukee *Journal*.

First place among the 375 papers of 10,000 to 50,000 circulation went to the Trenton (N. J.) Evening *Times*, second to the Wilmington (Del.) *Journal-Every Evening*, and third to The Sheboygan (Wis.) *Press*. Papers surviving to the final elimination in this division were: The El Paso (Tex.) *Times;* The Scranton (Pa.) *Republican;* The Athens (Ohio) *Messenger;* Arkansas *Democrat*, Little Rock; The Peoria (Ill.) *Journal;* St. Joseph (Mo.) *News-Press;* Jackson (Mich.) *Citizen-Patriot;* Denver (Colo.) *News*, and New Haven (Conn.) *Journal-Courier*.

First place among the 943 papers of less than 10,000 circulation went to the Amsterdam (N. Y.) Evening *Recorder*, second to The Beloit (Wis.) Daily *News*, third to The Evening *Tribune*, Hornell, N. Y. Papers surviving to the final elimination were: The Daily *Reporter*, White Plains, N. Y.; The Daily Mining *Journal*, Marquette, Mich; The Titusville *Herald*, Titusville, Pa.; Morristown Daily *Record*, Morristown, N. J.; The Morning *Press*, Santa Barbara, Calif.; The Oregon *Statesman*, Salem, Ore., and The Daily *Missoulian*, Missoula, Mont.

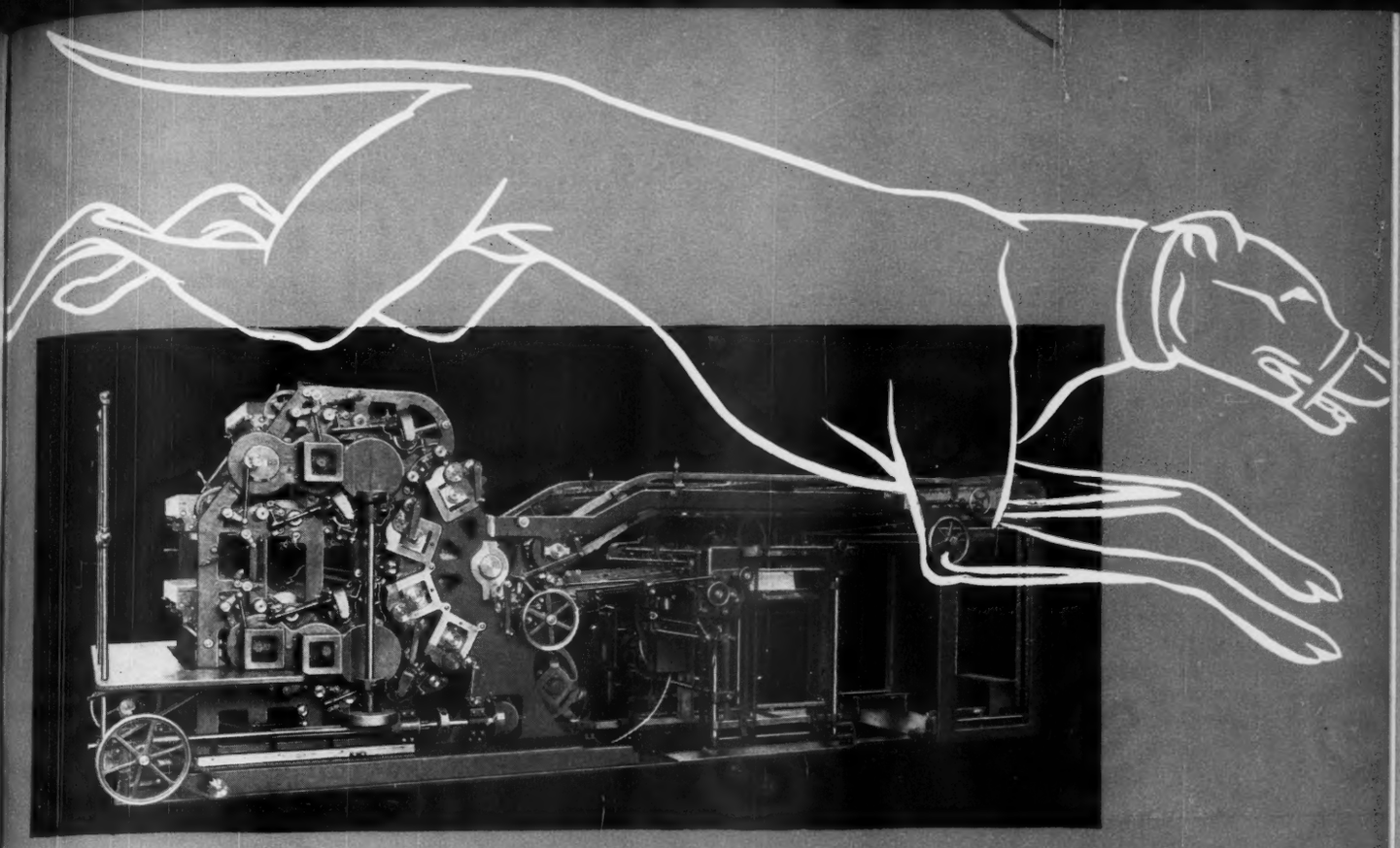
All papers in the contest were issues of March 4. They will be placed on public exhibit in the Ayer Galleries. Formal presentation of the cup and certificates of award will be made later.

Executive Changes

Noah Castle has been named superintendent of the composing room of the Toledo *News-Bee*.

James Austin, formerly composing room machinist at the Toledo *News-Bee*, now represents the Intertype Corporation in the northwest section of the Chicago territory.

First pages of the daily newspapers winning honorable mention among the 942 papers of less than 10,000 circulation entered in the Sixth Exhibition of Newspaper Typography conducted by the Ayer Galleries in Philadelphia. They are Evening Recorder, *Amsterdam, N. Y.; Daily* News, *Beloit, Wis., and the Evening* Tribune, *Hornell, N. Y.*



Cottrell's New "Greyhound" Press Establishes New Speed Records

Like the splendid animal for which it is named, the new Cottrell "Greyhound" Rotary Press is built for *speed.* This means, specifically, four-color printing of the finest quality at speeds up to 5500 sheets per hour. Even the larger presses, such as the 50x72 size, run four or five colors on super or coated up to 4500 sheets per hour. ¶ Volume production of full-color printing is distinctly a Cottrell rotary press job. In no other way can you get such remarkable color reproduction and such perfect register. In no other way can you fully satisfy the demands of advertisers and the general public.

COTTRELL

R. B. COTTRELL & SONS CO., WESTERLY, R.

NEW YORK: 25 EAST 26th STREET • CHICAGO: 552 SOUTH MICHIGAN AVENUE

[illegible] HORNE, LTD., 5 BALDWINS PLACE, GRAY'S INN ROAD, LONDON, E. C.

Type

Cast Both From Monotype and Ludlow Matrices on Giant Caster

By W. W. Wever*

HERE in the Columbus *Citizen* composing room we feel we have one of the most efficient non-distribution systems to be found anywhere. We use nothing but case storage for our type. We do not have a single type storage cabinet in the composing room. The casters are operated on the night shift during which time the operator also goes through the cases as he sorts them up. This operation takes very little time from caster operation. When the day shift comes on in the morning, a brand new assortment of type is ready for the day's ads. We found that a property man was not necessary, the caster operator having sufficient time to handle this work.

Long before the idea was an accomplished fact, the writer believed the use of Ludlow matrices on a Monotype giant caster was possible. The fact that Ludlow, Monotype, Linotype and Intertype matrices, up to 48 point, could be cast on the Thompson typecaster was an indication that it could be accomplished.

*Mechanical Superintendent, the Columbus *Citizen*, Columbus, Ohio.

When the Monotype giant caster was first considered for the composing room of the Columbus *Citizen*, preliminary investigation showed that we had a tremendous investment in Ludlow matrices which would have to be duplicated in Monotype matrices. Quite naturally, the trade-in value of these matrices or the second hand value of them was a long ways removed from the replacement value. With the thought in mind that it was possible to make use of these matrices and thereby salvage at least a portion of the investment, the writer suggested to the Monotype Company that the problem be put before its engineering department.

W. W. Wever Discusses Problem Encountered in Citizen *Composing Room.*

The first reaction was that it would be necessary to have special molds, holders, etc., in order to attain the

ELEVEN CURVED MODELS

Model "A"

A Scorcher for Every Purpose

Form-O-Scorch offers the most complete line of scorching equipment on the market.

FIFTEEN STANDARD MODELS are available for every type of work

. . . write for new list . . .

AMERICAN PUBLISHERS SUPPLY
WEST LYNN, MASSACHUSETTS

COLOR *for* NEWSPAPER PRINTING

Since 1893 Hoe has led the way in newspaper color printing, from the very first multi-color newspaper press built in that year on to the great Universal-Unit Hoe Multi-color presses which print every week the entire edition of *more than 5 million copies* of Hearst's "American Weekly," and also over 10 million copies every week of other Sunday color sections for some 40 of the leading American newspapers. Many millions more of both Sunday sections and dailies are printed with other types of Hoe equipment by several hundred other newspapers.

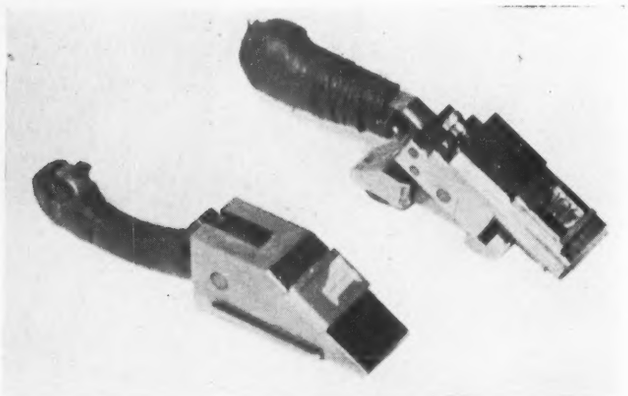
Hoe today is prepared to furnish the very *latest, fastest,* and *finest* color printing equipment to meet *all* requirements including auxiliary color fountains, portable ink pumps and rails, extra color cylinders, color attachments of every description and complete color presses.

To those interested Hoe offers an unequalled wealth of experience and a complete line of proven equipment, including the very latest developments in Sunday and daily color work.

R. HOE & Co., Inc.

General Offices
910 East 138th Street
(at East River)
New York City

BOSTON SAN FRANCISCO CHICAGO



Above: Special holder devised to accommodate adapted Ludlow matrices for making display type on Giant Caster. The knurled knob is used to release the slide which clamps the matrix against the end shoulder.

Below: Regular Monotype matrix holder with matrix locked in position ready for casting.

desired results. However, this method was not considered feasible from the production standpoint because of the amount of time that would be lost in making mold changes besides complicating the caster so that it would be necessary to give special instructions to each new operator.

After several conferences it was determined that it was possible to cast type from Ludlow matrices on the giant caster, using standard molds, by using a special matrix holder. Accordingly, we took one character each from the 122 fonts of Ludlow matrices. These were sent to the factory where the necessary alterations were made. The change is very simple, the matrix being milled off to provide a flat surface in order that the matrix will rest securely against the standard mold, the same as the Monotype matrix and at the same time provide a metal-tight seal. The 14, 18, 24, 30 and 36 point matrices are milled to 0.050 in. depth of drive, and the 42, 48, 60 and 72 point are 0.065 in. depth of drive.

The time consumed in changing from a 48 point font of Ludlow matrices to a font of Monotype matrices of the same point size consumes less than a minute—in other words extracting one matrix holder and substituting another for it.

Changing the individual matrix letter characters of the same point size is accomplished as readily as when a change is made from one standard Monotype matrix to another.

The type cast from the Ludlow matrices is perfect in every detail. At first we were skeptical about the side walls on the Ludlow matrices. We felt that the side walls would not be suitable for typecasting operation. Accordingly, we had an extra alphabet milled to give two altered Ludlow characters in case the side walls on one of the original characters disintegrated. To our surprise, we have not burned out a single character, in more than 2½ years of operation. Examination of the matrices shows no appearance of burning or wear at all.

At times we have hired a second operator to work a day shift during the busy season. Our regular operator gives the extra man less than 10 minutes instructions which enables him to handle the next shift by himself, provided, of course, he is a competent man otherwise.

EDES PHOTO-ENGRAVING

EDES SUPERFINE QUALITY ZINC

ZINC

THE STANDARD FOR MORE THAN 80 YEARS

HOLDS THE FINE LINES

THE EDES MANUFACTURING CO., PLYMOUTH, MASS.

Stocks Carried by the Following Representatives

John H. Heimbuecher Metals Co., 514 No. Third St., St. Louis, Mo.
Gazzolo Drug and Chemical Co., 119 So. Green St., Chicago, Ill.
E. H. Walker Supply Co., Printcraft Bldg., Washington, D. C.
Selby Mohr, 883 Mission St., San Francisco, Cal.
C. S. Illingworth, 49 Springville Avenue, Buffalo, New York
Thompson-Hayward Chemical Co., 2228 Blake St., Denver, Colo.
Thompson-Hayward Chemical Co., 909 2nd St. So., Minneapolis, Minn.
Metzger Photo Supply Co., 1091 So. Main St., Akron, Ohio
G. C. Dom Supply Co., 125 East Pearl St., Cincinnati, Ohio

The Paasche "No-Offset" Process Saved Over $1,000,000.00 for PRINTERS in 1935

• how much of that saving went to you?

One of hundreds of plants equipped with Paasche "No-Offset" Process

If you used those obsolete methods of preventing ink offset—slipsheeting, traying, winding, time delaying adjustments—your production costs were unnecessarily high. Nor were the printing results equal to those you would have secured with the original Paasche No-Offset Process.

Highest quality printing, sharp color contrasts, delicate tints, gloss inks, overprint varnish impressions—all are being handled at far less cost by the use of the Paasche No-Offset Process.

Hundreds of printers, profiting from this new development, are constantly equipping additional presses to better serve the increasing demand for quality printing at lowest cost.

As originators of this great development, we have a trained staff of engineers experienced in all types of printing, who are at your service to help you secure the utmost in economies and satisfaction in solving your ink offset problems. Ventilation of presses and press rooms to make your plant sanitary, fireproof and modern—are some of the supplementary services they render. We have equipment for every type of press, each especially engineered to insure maximum benefits at lowest maintenance costs. We pioneered, perfected, introduced this method of preventing ink offset that has saved millions for printers.

GENERAL PRINTING INK CORPORATION SPECIALTIES DIVISION

608 South Dearborn Street, Chicago, Illinois. Fred W. Clayton, General Manager.

Distributor for the PAASCHE *"NO OFFSET"* Process

General Printing Ink Corporation, after many months of research and investigation of this process to ascertain its economies, benefits and advantages, are now placing a staff of highly trained experts at your service so that printing establishments everywhere in the United States and Canada may be better served and able to take full and immediate advantage of the great benefits obtainable from this invention.

ANY PAASCHE ENGINEER, or any representative of
Geo. H. Morrill Company
Sigmund Ullman Company
Fuchs & Lang Manufacturing Co.
Eagle Printing Ink Company
American Printing Ink Company
Rutherford Machinery Company
can supply the information you want and give you that service that will assure you complete satisfaction from the use of this Process. For descriptive literature address

GENERAL PRINTING INK CORP.
Specialties Division
608 S. Dearborn St., Chicago, Illinois
Phone Harrison 8911

OR

Paasche Airbrush Co.
1941 Diversey Parkway Chicago, Illinois
Phone Buckingham 6650

Iowa

Composing Room Executives Will Celebrate Tenth Anniversary

By Leo J. Carle*

THE Iowa Daily Newspaper Composing Room Executives will hold their tenth annual convention on June 8 and 9, 1936 at Waterloo, the birthplace of the association. This year's meeting will mark the tenth anniversary of the founding of the Iowa association at Waterloo. Plans are being made at the present time to present a program of especial merit in honor of the occasion. A feature of the program will be an address by Hon. A. E. Giegengack, United States Public Printer, for one of the Monday sessions.

The Iowa association was the first organization of its kind and was founded at a meeting called by Leon A. Link superintendent of the Des Moines *Register* and *Tribune* composing room, who at the time was in charge of the Waterloo Daily *Courier* composing room. In response to letters sent out by Mr. Link, about ten daily newspapers were represented at the first meeting and at that meeting the organization was made permanent. Meetings have been held each year since then.

*Leo J. Carle, President, Iowa Association Composing Room Executives Association.

Since the first meeting the association has met at Davenport, Des Moines, Council Bluffs, Dubuque, Ottumwa, Mason City, Clinton and Cedar Rapids in the order named.

Attendance and interest has grown at each of the Iowa meetings and for several years composing room executives from Illinois, Minnesota, Michigan, Wisconsin, Nebraska and Missouri have attended.

The Iowa association has the approval and support of the Iowa Daily Newspaper publishers and a number of them have attended the sessions. The meetings are devoted to discussions of composing room problems and much benefit has been derived by those attending. Prominent speakers have addressed the sessions and each time a well balanced program has been arranged.

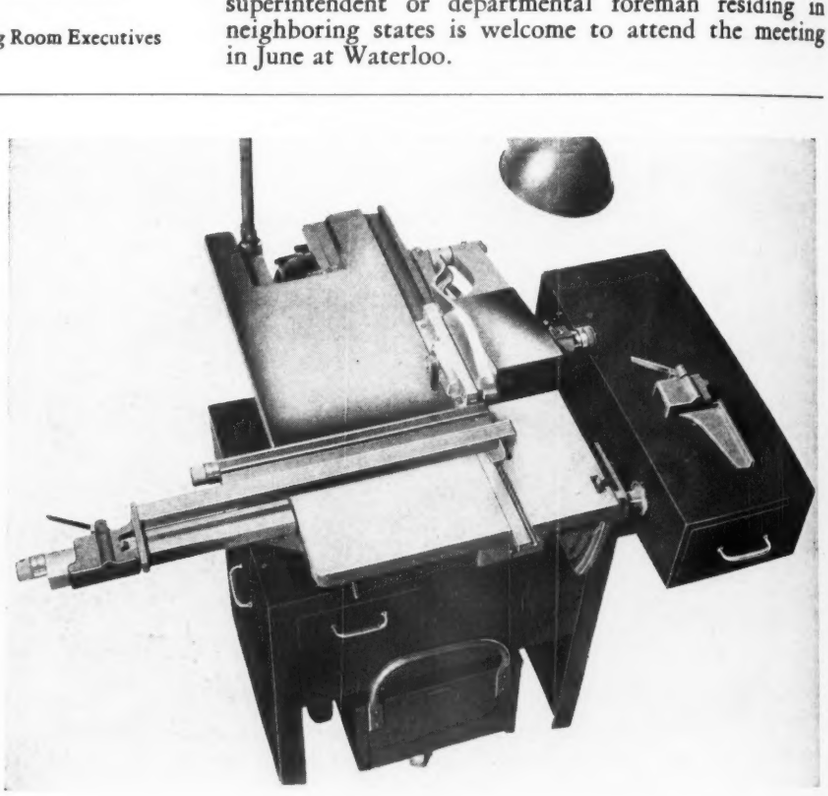
At the meeting in Cedar Rapids last year it was voted to ask the stereotypers of the Iowa papers to meet with the composing room men. This was done to afford an opportunity for the exchange of ideas between the two departments and if the plan works well it is the intention to invite the pressmen to the next meeting in 1937.

Leon A. Link was the first president of the organization and Tom Kelley (retired) of the Davenport *Times* was the first vice president. Leo J. Carle, who is now the president of the Iowa group, was the first secretary-treasurer. Edward Funk, of the Waterloo *Courier* is vice president, and Paul Kamler, of the Clinton *Herald*, is secretary-treasurer. Mr. Carle stated to *Printing* Equipment *Engineer* that any composing room or stereotype superintendent or departmental foreman residing in neighboring states is welcome to attend the meeting in June at Waterloo.

3 NEW No. 3

C&G

SAW TRIMMERS in MILWAUKEE JOURNAL



For six months the *Milwaukee Journal* put the New No. 3 C & G Cabinet Model Saw Trimmer to every conceivable composing room test. The result of this test was an order for two ADDITIONAL No. 3 C & G Saw Trimmers.

The speed, accuracy, safety and convenience of operation of the New No. 3 C & G are of vital importance in modern composing room sawing and mitering.

An entirely new and faster system for undercutting, greater capacity, absolute chip and metal disposal, a new sturdy extension gauge, and a two way mitering gauge, are some of the features of the No. 3 C & G.

A new circular giving the complete information, and prices, will be sent upon request. Write today for circular No. 3PE.

Milwaukee Saw Trimmer Corporation, 612 East Claybourn Street, Milwaukee, Wis.

ATF Restoration Work

Acting with record speed while presses and type cabinets were submerged as a result of the floods in the Pennsylvania, Ohio Valley and New England areas, American Type Founders provided an emergency service that assisted many printers to get back in operation long before normal conditions were restored in other lines.

Under the direction of General Sales Manager Harry W. Alexander, a bulletin offering special cooperation was issued at Elizabeth. Emergency instructions on cleaning and rehabilitating presses and other equipment were rushed out, service men were dispatched to the affected districts, and extra equipment was hurried from Elizabeth, Baltimore, Buffalo, Cleveland and Chicago Branches. In some cases, aid was under way while some ATF Branches were under water or isolated by broken communication systems.

At the same time, field men went into the worst stricken districts. Herbert Ferguson, Russ Borton, Walter Marder, ATF Managers of Philadelphia, Pittsburgh and Boston Branch offices respectively, led their men by auto over washouts and detours, carrying drinking water, and armed with military passes to reach inundated newspapers and job printers.

Thursday, March 26th, while flood waters were still raging and transportation was still disrupted, two special trucks with replacement parts and equipment for printers in Williamsport, Lock Haven and Sunbury, Pa., left the ATF Branch in Philadelphia in response to emergency demands.

New Type Face by Benton

A new type face said to combine refined beauty with legibility has just been released by American Type Founders. It bears the name of its designer and is the result of several years devoted to a consideration of classic characteristics, viewed in the light of the modern trend by Morris Benton. It is a middle-of-the-road face, revealing the best qualities of the Romans and Old Styles modified by a modern interpretation.

Masses of the new face indicate the care and special features of design that attended its development, producing an effect that is entirely free from dazzling sensations. Benton is available in the complete range of sizes from 6 to 72 point.

FOUR FLAT MODELS

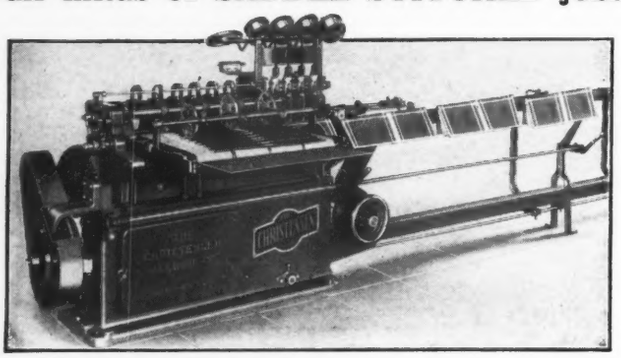
Form-O-Scorch offers four flat scorching machines to meet the requirement of all stereotype foundries. The small weekly or the large city daily can find the machine to meet their requirements in this group.

· · · write for new folder · · ·

AMERICAN PUBLISHERS SUPPLY
WEST LYNN, MASSACHUSETTS

BUSINESS IS BOOMING

on house organs, trade publications, all kinds of SADDLE STITCHED jobs



...Save time, make money with this modern gang stitcher . . .

Trade binderies and printers bought more of these big, fast machines during 1935 than they have for years. They find that one Christensen replaces three or four hand-fed machines. Setting is so easy, they use it on the smallest jobs. On the big ones, it is a life-saver—keeping pace with the fastest folders.

CHECK THESE POINTS

when you consider a modern installation:

1. Stacker delivery—a valuable and exclusive feature.
2. Protection against smearing of the work—due to the Christensen conveyor chain system and protection against friction at the saddle.
3. 9000 operations per hour; on Christensen Stitchers equipped with multiple stitcher heads, one feeding operation handles one-up or gang work with maximum speed and minimum stitcher-head operation.

Mail the coupon for bulletin giving complete details

CHRISTENSEN GANG WIRE STITCHER FEEDER

THE CHRISTENSEN MACHINE CO.
100 Fourth St., Racine, Wis.

Send your free bulletin on the Christensen Gang Wire Stitcher Feeder.

Name ..... Position .....

Company .....

Address .....

The Proper Viewpoint

By H. A. PORTER*

YEARS ago, it was common practice to consider that business was strictly limited in volume so that for anyone to increase within the field, some other or others must decrease. More recently it has been recognized . . . that markets for basic commodities have no fixed limits and that only the enterprise of those interested, the service, and the quality of the product, limit their scope.

I want to go firmly on record as saying that offset freely and gladly accords to these others their place in the sun . . . I suggest therefore that we understand the basic truth, that for each job some one process is best adapted, and then in the true spirit of cooperation and mutual helpfulness, face the fact that industry best progresses with harmony and mutual recognition of merit. How much better is such a program of fairness and understanding among those of us in the great family of the Graphic Arts than an attitude of bitterness and resentment . .

Many men have pronounced this a policy of fairness. I believe, sincerely, that it is such. It is well known, too, that the industry as a whole and as units can go further with policies of fairness—of credit where credit is due—of evaluations honestly made. Business men of acumen embrace this principle wholeheartedly. There are endless examples of the truth of this. The railroads today are interested in truck, bus and air lines. A long established steam engine builder added gas and diesel engines. A leader in the glass bottle industry is at least considering an expansion program to embrace metal containers. Knocking is not sound business. It is so much easier and better to accept the forward march of events than to fight against a rising tide—to give over fighting upstream against the strong current and economic urge. At best such fighting is back-breaking and ineffectual because business trends are not the superficial forces that all of us too often imagine.

Business today is keenly alert, amazingly sensitive to change, to constant betterments, not to attempt to overcome the forward surges by battling opposition, but rather to recognize and attempt to meet the improvement.

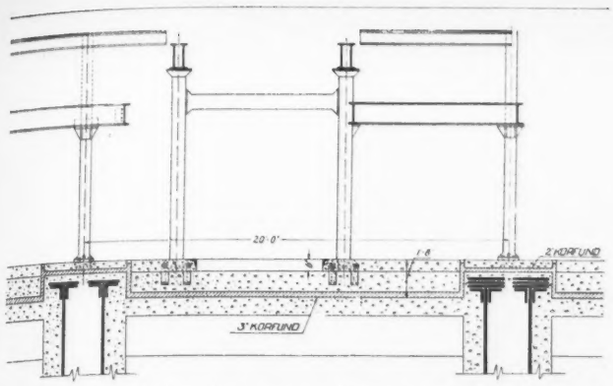
*Vice President in Charge of Sales, Harris-Seybold-Potter, Cleveland, Ohio. Abstract of address delivered before the Washington (D. C.) Club of Printing House Craftsmen, February 18, 1936.

Scherer Obtains Patent

On March 3 a patent was issued to Ernest Scherer, Superintendent of the Engraving Department of The Minneapolis *Tribune* on his Rolup engraving process which he developed in 1928. The trademark, Rolup, was registered in June, 1935. While at present Mr. Scherer has not decided in what manner he will merchandise his process, it is believed that he will reach a decision on that matter in the near future.

Up to the point where the transfer is made from the thin glass to the metal, the Rolup process is handled exactly like other processes. In the etching, it is claimed, the Rolup process brings out all the values of the original photograph.

By the Rolup method, the plate is "rolled up" and when placed in the acid bath immediately starts to etch. The Rolup plate, it is said, can be turned out in from six to seven minutes. Further claims are as follows: The half-tone carries the tonal qualities of the photograph because the highlights are capped and protected while the middle tones are left wide open for etching; the dots of the Rolup plate being conical in form, cause the matrix to release easily from the cut when the pressure is released.



Cross-section through the printing press foundations as installed in plant of the Chicago Daily News, *showing method used to isolate the concrete press foundations. The concrete foundations are 1 ft. 5 in. thick and are isolated by means of 3 in. Korfund at the bottom and 2 in. Korfund at the sides. Isolation, also, is carried across from one press foundation to the other over the building columns to provide anchoring for the structural supports of the press. In this way a floating base is obtained for the entire assembly of presses and foundations.*

Vibration

Isolation Without Rigid Bolting Of Machines to Bases

By S. Rosenzweig*

IN THE job printing plant no machines should be bolted to rigid concrete masses. In newspaper plants, however, where there are many units in operation, the presses are usually bolted to a concrete base plate to insure perfect alignment. This concrete base should, however, rest on some resilient mat so that it will not be rigid. The evils that result from bolting a press to a rigid, unyielding foundation mass are summarized in the following discussion.

Flat-bed presses have a large amount of "unbalance." Due to the horizontal forces set up by their operation, they vibrate and cause transmission of vibration. A vibrating machine is an objectionable condition in a printing plant and leads to poor results. But in addition the transmitted vibration can be felt throughout the entire structure which houses the machine, and is very annoying. Ofttimes an attempt at remedying this condition has been made by bolting the machine to a concrete foundation. The fallacy of such a procedure is at once apparent, as it does not eliminate the transmission of vibration and in addition the vibrating of the press on an unyielding base causes torsional strains to be set up in the machine frame. In time, as this action is continued, the distortion becomes appreciable and it affects all the operating mechanisms of the machine and leads to much needless worry and expense.

Modern engineers have realized this problem—and have solved it. Instead of bolting the machine rigidly to a heavy mass which does not "give," a resilient material is placed under the machine. Then when the machine vibrates this resilient material is alternately compressed and released. Work is done on the isolating medium by the machine in compressing it, and the medium gives up this work by returning to its original shape. Thus the more elastic the isolating material, the more efficiently does it operate. Of course this "breathing" of the resilient medium is at most a few

(*Continued on Page 29*)

*The Korfund Company, Inc., Long Island City, New York.

A New Ink that Will Make **PRINTING PROFITS** for You

The Yankee Clipper, fleet courier of the Seven Seas, carried silks and spices from Old World to New.

Today Morrill's *Clipper Blue*, keyed to the spirit of that pioneer craft, lifts your printed message on wings of vibrant color, carrying silks and spices and a million other articles of commerce to old and new markets everywhere.

***Clipper Blue* in full strength is remarkably permanent and has a rich, deep overtone with a bronzy sheen. Reduced with transparent base or semi-opaque white, it provides a variety of clean, brilliant tones. It's alkali-proof and water-proof and easily worked. Try it in your own plant. Write for samples.**

GEO. H. MORRILL CO.
Division GENERAL PRINTING INK CORPORATION
100 SIXTH AVENUE NEW YORK, N. Y.

Branches — Boston • New York • Philadelphia • Detroit
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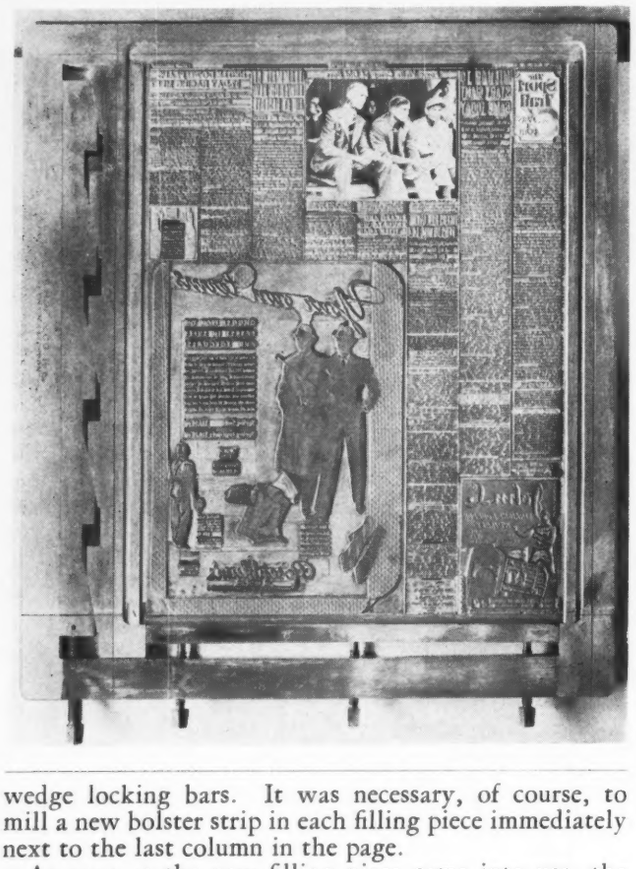
Los Angeles • San Francisco • Seattle

Clipper Blue BY MORRILL

Double Bolsters Useful In Stereo Casting

THE double bolster strip in the stereotype chases at the Cleveland *Plain Dealer* came into use on the wedge side of the page form at the time a change was made from 12½-em to 12-em column. It was decided to retain approximately 80 chases which had been made originally for the 12½-em column. To compensate for the new and narrower page width a 3½-em steel filling piece was inserted in each chase next to the



wedge locking bars. It was necessary, of course, to mill a new bolster strip in each filling piece immediately next to the last column in the page.

As soon as the new filling piece came into use, the old bolster strip in the chase proper served a new purpose—that of providing a limit stop for the pouring sheet in the casting box instead of the screw adjusting means which had been used to regulate the position of the pouring sheet up to that time.

It is a well-known principle in stereotype casting (with reference to halftone areas in a page form) that if part of the plate can be poured before the molten metal reaches the halftone, a sharper halftone reproduction can be obtained. This is due, probably, to the slower solidification of the metal in that portion of the cast which is not immediately next to the edges of the mold cavity. Consequently, the metal sets with a finer and more consistently uniform printing surface.

To carry out this idea, a number of chases like that shown in the illustration were made recently for the Cleveland *Plain Dealer*. Double bolster strips are provided on both sides of the chase. This permits the stereotyper to trim the mat at the register marks so he can place it is the casting box either in the regular manner or in an inverted position. If a halftone illustration appears at the left portion of the page the mat may be placed in the casting box in an inverted position. Likewise, if a halftone area appears on the right portion of the page the mat may be inserted in the casting box in the regular way.

View of display room in new Boston quarters of Mergenthaler Linotype Co. Mark H. Boynton is New England representative.

Opens New Boston Quarters

Throughout four days, from Monday, March 23, to and including Thursday, March 26, hundreds of New England publishers, master printers, composing room executives, machinists, operators and others in the graphic arts called at 10 State Street, Boston, to felicitate Mark H. Boynton, New England representative of the Mergenthaler Linotype Company, on his fine new quarters in the Devonshire building.

At noon Monday, March 23, Harry L. Gage of Mergenthaler headquarters was a featured speaker before the Massachusetts and Rhode Island Press Association which met in a body at the new quarters.

The many visitors were welcomed by Mr. Boynton and members of his staff, including Arthur H. Cooke, William G. Murray, Joseph J. Dallas and Harry Paul.

Will Exhibit at Cleveland Exposition

To tell the story of modern offset lithography, a group of Cleveland lithographers, under the chairmanship of Carl F. Moellman, President of the Continental Lithograph Corporation, have organized the Exposition Lithograph Company for the installation of a Harris two-color 41x54 offset press which will be operated by the group during the hundred days of the Great Lakes Exposition to be held in Cleveland, beginning on July 1.

Members of the committee are: John Kuentz, Treasurer, The Central Lithograph Company; Carl F. Moellman, President, The Continental Lithograph Corporation; Leonard E. Solomon, Secretary-Treasurer, The Crane-Howard Lithograph Company; George Morgan, Vice-President, The Morgan Lithograph Company; Percy N. Calvert, President and Treasurer, The Reserve Lithograph and Printing Company.

H. A. Porter, Vice President, The Harris Seybold Potter Company, has been appointed a member of the committee representing the press manufacturer.

The press will be used for the production of lithograph matter under actual shop operating conditions.

Vibration

(*Continued from Page 27*)

thousandths of an inch and cannot be seen by the unaided eye—precise scientific instruments being necessary to detect any motion. For this reason cork and particularly steel springs have been used extensively as isolating media. The cork or steel springs operate in a manner similar to rubber heels. When a person walks or runs, the rubber heels on his shoes act to take up shocks which otherwise would be transmitted to the major anatomical members of the human body. Just as rubber heels reduce fatigue in the human frame, so isolation reduces fatigue in the machine frame.

Another important consideration is the elimination of misalignment. On a two-color job or a process job, misalignment is a major problem as it leads to poor registration. Not only vibration from the press itself, if it is bolted to a rigid foundation, but particularly vibrations transmitted from surrounding unisolated presses interfere with operation, and perfect results cannot be expected. After all, if the forms work out of place by only a few hundredths of an inch, perfect registration is impossible and many hours work may be lost. Resiliently mounting the machines will eliminate the effects of such a condition.

In the rotary newspaper presses, however, a much different situation exists. Here a greater degree of "balance" is attained. Still, as previously stated, even these presses should not be bolted to rigid and unisolated concrete masses. Similar detrimental effects in the machine itself as well as annoying and costly transmitted vibrations as outlined above are the results of such action. The proper method of installation is to bolt the machine to a concrete foundation about twelve to fifteen inches thick and place the isolating medium underneath the foundation. Thus the foundation and the machine rest on the resilient material which arrests the transmission of vibrations and at the same time prevents bending stresses from being set up in the machine frame.

It has been shown that bolting presses to rigid foundations is unnecessary and detrimental. Of the materials experimented with to provide a resilient means for isolating machines and thus obviate the necessity for bolting them to unyielding masses, engineers have found that natural cork and steel springs give fine results. Natural cork has a high modulus of resilience, resists weathering and can be fabricated readily in predetermined sizes and thicknesses, all of which make it very desirable as an isolating medium. In our opinion, however, steel springs provide the most desirable form of isolation known. The high elastic qualities of steel, and its high structural strength make it ideal for isolating vibrations.

Each installation has its individual problems. A certain arrangement of cork or steel springs under one press installation that makes for a perfect isolation job, may prove useless and actually detrimental on some other installation. It is not only the selection of the isolating medium that gives best results but the arrangement and installation must be determined in accordance with the laws of vibration isolation. In all cases an isolation specialist should be consulted before proceeding with any installation.

Crowell to Spend Million

The Crowell Pub. Co., Springfield, O., will spend more than $1,000,000 for new presses and power equipment within the next eighteen months.

Does the TAIL wag your dog?

DO you let so small an item as dry mats determine the quality of output from a newspaper plant on which many thousands have been spent?

If so, the remedy is to use mats that bring out the full worth of your plant investment. Certifieds have a name for uniformity, for speedy operation, low temperature casting and for especially fine results where results are most difficult in solids and screened plates.

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION

338 MADISON AVE., NEW YORK, N. Y.

Certified DRY MATS

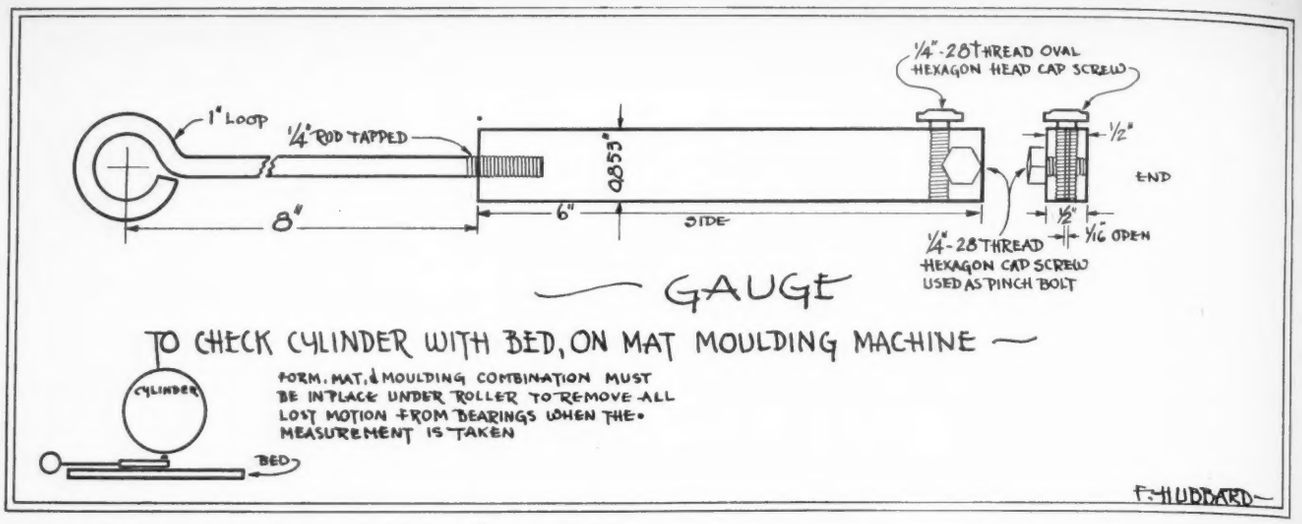


Diagram of adjustable gauge used in the plant of the Des Moines (Ia.) Register *and* Tribune *stereotype department to check the parallel relationship of the mat roller cylinder and bed. The feeler screw at the end of the block is adjustable and is held in position by a pinch screw which tightens the slotted ends of the block against the adjustable feeler screw.*

Mat Roller Parallelism Gauge

By Leon A. Link*

A GAUGE is used in the plant of the Des Moines (Ia.) *Register* and *Tribune* to determine the height of the stereotype mat roller from the bed of the machine. The gauge provides a means for determining when each bearing is adjusted so the cylinder will be of the right height and will exert equal pressure from side to side in relation to the bed. It was designed and made by Herman Fesenmeyer, who at the time was plant machinist.

Measurement of the gap between roller and bed is taken at the time a form is being molded. The roller is stopped on impression and the gauge is inserted successively under each side of the cylinder and adjusted until frictional contact of the gauge is obtained. The gauge is then taken out and measured with a micrometer. This measurement gives the distance between the roller and the bed. It is a comparatively simple task to obtain adjustments.

It is essential that measurements be taken while the form is being molded in the regular manner with mat and molding combination. Otherwise the slack in the bearings would not be taken up and measurements between bed and roller would not be accurate.

*Composing Room Superintendent, Des Moines (Ia.) *Register* and *Tribune*.

TO MECHANICAL EXECUTIVES
who have not yet sent for samples of
FLEX DRY MATS

FLEX dry mats will, we believe, enable you to turn out better, more uniform printing plates, in less time and with less trouble. They are particularly good for reproducing halftones.

Sending for free samples of FLEX dry mats will not involve the slightest obligation on your part. Please mention what thickness and shrinkage you require, what kind of casting equipment you use, and how many casts per mat.

Flexideal Dry Mat Co.
21 West Street New York

FLEX
DRY MATS

Shell Casts

Made on Ludlow by Means of Mask on Standard Stick

A NOVEL device for making shell casts of type lines on the Ludlow from Ludlow matrices is in use in the composing room of the Akron (O.) *Beacon-Journal*. Composing Room Superintendent Earl Woodard states that this method has been used for some time and was originally devised by Paul Reese, a Linotype operator.

Mr. Woodard explained that these shell casts provide a quick and economical way of placing price figures and letter-lines in plate mortises, or on an angle in a regular type-set form, without the necessity of cutting a corresponding opening in the base underneath. Any selection of matrices available in the *Beacon-Journal* composing room can be used. The price lines or wording to be placed in mortises, or placed on an angle, are cast and simply dropped into the mortised area of the plate or laid on the form at the desired angle and rest upon the same base upon which the plate is mounted or upon the base space left for the angle line.

Stereotype shell casts approx. 0.153 in. thick are used in the *Beacon-Journal* plant and the basing material is of a height approx. 0.766 in. When it is desired to mount a zinc etching, regular machine-cast strip material 0.084 in. thick is first laid upon the basing material. In case there are straight or angular mortises in a zinc plate which are to be filled in with large price figures or lettering, the 0.084 in. slug strip material underneath the mortises is removed before dropping in the Ludlow shell cast. The "bodyless slugs" made on the Ludlow are cast the depth of drive of the letter characters in the matrices which makes the cast approx. 0.153 in. thick.

In the accompanying diagram is shown the modified Ludlow stick. A brass plate 0.031 in. thick, 1⅜ in. wide and 3⅝ in. long, is fastened to the underside of the stick by means of 4-48 flat-head steel screws. Two brass filling strips ¼ in. wide are fitted between the stick and plate, through which the plate-fastening screws pass, the screws turning into tapped holes in the stick frame. The two rows of holes through which the metal is ejected into the

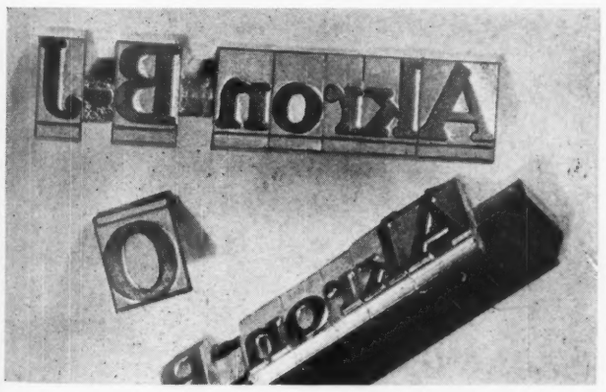


Fig. 1.—In the background is shown a Ludlow slug cast from matrices in a standard stick. In the foreground is a shell casting from the same line of matrices. Previous to casting this line, the matrices were taken from the standard stick and placed in a Reese Modified Stick (shown in Fig. 2). The 48-pt. capital "O" was cast singly from one matrix. Before placing the stick in the machine the balance of the space was filled out with standard Ludlow quads.

"I Asked 8 Men"

Baltimore, Md., March 19, 1936.

Mr. W. C. Hammond, Pres.
Hammond Machinery Builders, Inc.
Kalamazoo, Michigan.

Dear Mr. Hammond:

Rather than take my own views of the New Hammond "Glider" TrimOsaw, I felt it would be a good plan to get the impressions of the men who actually use it. I therefore asked eight of my men what they thought of the machine. The unhesitating answer in all cases was that *they liked it*.

I then asked what points they considered superior to the equipment which has been operating in our plant for several years. A summary of these opinions indicates that the "Firm-Grip" Work-Holder Clamp, the "Quick-Set" Point Measure Gauge and the "gliding" table with its free, easy movement, are the outstanding improvements.

These three features, which facilitate speed, accuracy and convenience, are to my mind the most important, as they cover about 95% of the machine's use. Other features contributing to simplicity of operation are: the ease with which trimmer knives can be re-sharpened and set in relation to saw; the mechanism for accurately raising and lowering the saw; easy accessibility for cleaning and oiling.

The machine as a whole has a very attractive and modern appearance and we consider it an ornament to our composing room.

Very cordially yours,

Baltimore Type & Composition Corp.
H. F. Czarnowsky, President

Hammond Machinery Builders INC.

1604 Douglas Avenue, Kalamazoo, Michigan

Without obligation please send copy of New "Glider" folder and complete details of your Special Introductory Price Offer.

Name _____

Firm _____

Address _____

(Please attach to your business letterhead)

Ludlows are trouble free and simple

For nineteen years the Pantagraph has used Ludlow equipment to advantage. The machines have been trouble free and simple enough for even the youngest apprentices to operate. The Ludlows have never failed to meet all reasonable production requirements, both as to quality and quantity.

Russell B. Miller
Mechanical Superintendent
Bloomington Daily Pantagraph

Ludlow Typograph Co.
2032 CLYBOURN AVENUE
CHICAGO · · · ILLINOIS

Set in Ludlow Mayfair, Eden, and Eden Bold.

matrix aperture to form the shell cast, are spaced approximately ⅛ in. apart. The distance from hole to hole in each row is approximately 0.112 in. There are 31 holes in each of the two rows. The holes are drilled with a No. 58 twist drill and are countersunk nearly through the brass plate on the side which locks against

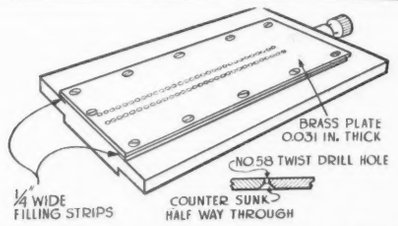


Fig. 2.—Diagram showing modifications made in stick to enable the operator to compose and cast "shell type" on a Ludlow machine.

the mold face. In this way the jet connection between the shell casting and the slug in the mold body is easily broken by retraction of the mold from the stick during normal casting operation of the machine. The blank slug which has been cast in the mold is ejected and delivered as usual by the machine. After the stick has been removed from the machine the matrices are distributed and the shell casting lifted from the mask in the stick bottom.

Trampusch and Zeller Speak

Otto R. Trampusch and Alex Zeller, of The Goss Printing Press Company, Chicago, appeared as guest speakers at a meeting of The Toronto Club of Printing House Craftsmen held at the Royal York Hotel, Toronto, Canada, on March 25th. They spoke on gravure printing.

Both of these men are internationally known in the Graphic Arts industry and are experts in their respective lines. Mr. Trampusch, a graduate of the Engineering College at Brunn, Moravia, and for years identified with large American and European press builders, is sales engineer and technical advisor in connection with rotogravure and rotary presses for Goss. Mr. Zeller, whose experience in lithography was acquired in Europe, South America and the United States, serves the same company as reproduction expert in rotogravure.

Mr. Trampusch and Mr. Zeller addressed a meeting of the Montreal Club of Printing House Craftsmen at the Mount Royal Hotel, Montreal, Canada on January 20th.

Value of Printing Ink Printing Strength

Offset lithographers, from necessity, are more conscious of the importance of the printing strength in printing inks than letterpress printers, because it is impossible to offset an ink film as thick as can be printed direct. Offset lithographers do not have trouble with tints or light colors, but they do have trouble with blacks, deep blues, or any other colors of high value, and it is for this reason that they purchase inks having good printing strength, but which are necessarily higher in price than weaker inks. Although the limitations of the letterpress printer are not so great, the better informed printer recognizes the advantages of inks having high printing strength.—S. L. Karpeles in The American Ink Maker.

Equipment And Supplies

Bi-Color Proving Process

The Bi-Color Proving Process is a method for printing in one impression on an ordinary proof press a corrected galley of type matter so that the new lines which have been corrected by the machine operator and which have been inserted in the galley in place of the lines containing errors will be printed in red ink and the original lines in which there are no corrections will print as usual in black ink. In other words, in taking a revised galley proof, all corrected lines and new matter appear in red ink in the proof while the undisturbed or uncorrected matter prints in black ink.

In an announcement made by the Mergenthaler Linotype Company, distributors of the process, it is stated that Bi-Color Proving utilizes the physical properties of special inks to permit the secondary inking of a corrected galley without fouling the first inking of the slugs embodying the desired corrections.

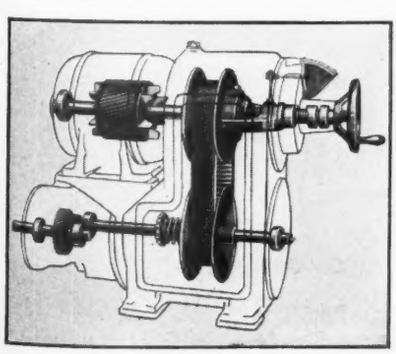
In operation, the procedure is as follows:

(1) The galley proof is corrected by the operator as usual.
(2) The corrected slugs are then inked separately with a brayer carrying Bi-Color Red Ink.
(3) The corrected lines which have been inked with red ink are then inserted in the galley in place of the lines containing errors.
(4) The entire galley is now inked with Bi-Color Black just as any ordinary galley would be inked previous to pulling the impression. The black ink does not foul the corrected lines which have been inked previously with the Bi-Color Red ink.
(5) The proof is taken in the ordinary manner (with any normal paper) to print the Bi-Color proof. The corrected lines will appear in red ink and the undisturbed lines will print in black ink.

The Bi-Color Proving Process is adapted for use in connection with directory composition and other listings which require periodical additions to and correction of standing matter. It is adapted also to directory work which is reset entirely for the checking of corrections in revised proofs and page proofs. It is intended for use in book or magazine composition and provides a means for measuring and accounting for revision time.

Vari-Speed Motodrive

A variable speed drive is announced by the Reeves Pulley Co. With the new Reeves Vari-Speed Motodrive any make of foot-type, constant speed motor within standard NEMA dimensions may be used. By turning a convenient handwheel any desired speed within the range is available. A dial indicator registers speeds on a scale calibrated from 1 to 6.



Phantom View showing component parts of Reeves Vari-Speed Moto Drive. The vertical and horizontal designs each are built in four sizes to take motors from ¼ h.p to 7½ h.p. capacities, covering speed ratios from 2:1 through 6:1. Output speeds ranging from 1.35 r.p.m. min. to 3480 r.p.m. max. may be obtained in different combinations of sizes, ratios and reduction gears.

(*Continued on Page 40*)

BURGESS CHROME MATS

Here Are The Facts

New pliability...easy handling...plus a **well-held** deep impression that gives a fine, smooth cast....use Burgess Chrome **Syndicate** Mats.

BURGESS CELLULOSE COMPANY
FREEPORT, ILLINOIS

CHROME MATS
A Laboratory Product
A 252

Pacific Coast Representative, RALPH LEBER,
426 Polson Bldg., Seattle, Washington

BURGESS CHROME MATS

BURGESS CHROME MATS

BURGESS CHROME MATS

Intaglio enthusiasts justifiably predict a great future for rotogravure, but progress will also be noted in lithography and letterpress. No process will be entirely dispensed with at the profit of a competitive method; the demands of civilization are large and varied enough to provide a "place in the sun" for any process enhancing the beauty and knowledge of mankind.

Rotogravure

By J. S. MERTLE*

Concurrent with the popularity of intaglio plates in lithography, rotogravure is rapidly growing to assume a position of major importance in the Graphic Arts. Generally considered, present methods do not essentially differ from the principles laid down by Karl Klic, the inventor of modern rotary intaglio printing.

No recent photomechanical advancements have been noted in rotogravure. The employment of carbon tissue as a gelatinous resist during etching of the cylinders is still adhered to. Efforts have been put forth to effect its displacement in flat-bed gravure by flowing a solution of bichromated gelatin over the flat copper plate. This idea has not proved entirely successful, and it is doubtful whether a coating of gelatin so applied will give the uniform results of carbon tissue.

In work with rotary surfaces, certain English plants flow the copper cylinders with a solution of silver nitrate and potassium cyanide. The resulting mixture of silver cyanide provides a thin film of silver on the copper surface, preventing the carbon tissue from coming into actual physical contact with the wet copper, which is known to exert a certain tanning action on the gelatin of the tissue.

Advocates of this system assert that a better separation of the shadow tones is thereby attained, but the experiments of Frederick C. Lee (Director of Rotogravure of Brown & Bigelow) have not substantiated these claims. According to Mr. Lee, the slight advantage gained is not worth the additional work and trouble involved in the method.

Chromium plating of cylinders is also gaining great favor in roto circles. A normally etched cylinder usually commences to show evidence of attrition in the light tones after 50,000 impressions; with a chromium-plated cylinder, it is possible and practical to deliver 1,000,000 impressions without appreciable difference between the first and last copies from the press.

But even then, further utility of the cylinder has not been impaired. Should the film of chromium show signs of wear by appearance of the copper through it, the chromium can be removed by application of hydrochloric acid. The cylinder may then be replated; in fact, this replating operation may be repeated any number of times without damage to the etched surface of the cylinder.

The rotogravure printer, the lithographer, and the letterpress printer are all working for the enlightenment of a common humanity. Who knows what final benefits may accrue from an intelligent and broad-minded co-operation between the respective methods?

*Abstracted from paper presented at the Cincinnati meeting of the Graphic Arts Research Bureau, June 19-21, 1935.

Can You Use

A ROTOGRAVURE PRESS IN YOUR PLANT?

Somewhere there is a paper converter, bag manufacturer, folding box maker, textile, rubber, oilcloth or commercial printer who can use a large Rotogravure Printing Press. To someone it will be a real opportunity. This press is as good as new. It includes 10 copper cylinders and cylinder making equipment. Prints rolls up to 70" wide on one or both sides at the same time. One color on each side.

It is ideal for printing fancy backgrounds or applying a high gloss or for coating. It has a speed of 30,000 feet per hour when printing on paper. Originally it cost approximately $70,000. Now it can be purchased at an extremely low price for a quick sale. The press is guaranteed for performance, was made by a reliable company and can be seen by appointment in Boston, Massachusetts.

We manufacture smaller size Rotogravure Presses on special orders. If you are interested in this large press or a smaller special press, get in touch with us at once.

ROTOGRAVURE ENGINEERING COMPANY

Builders of Hyroto, Reco, Hynorth, Roll or Sheet Fed Gravure Presses

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Patent Papers:

Printed copies of patents are furnished by the United States Patent Office at 10 cents each. Address the Commissioner of Patents, Washington, D. C., and enclose 10 cents for each patent paper wanted.

Patents

Relative to Variety of Plate Making Processes Allowed

FEBRUARY-MARCH

Composing Machinery:

2,031,366. TYPOGRAPHICAL SLUG CASTING MACHINE. William Fairall Gorse, Altrincham, and Richard Henry Scott, Enfield, England, assignors to Linotype and Machinery Limited, London, England, a company of England. Application March 17, 1934, Serial No. 716,115. In Great Britain April 8, 1933. 14 Claims. (Cl. 199—49.)

1. In a typographical slug casting machine, the combination with a transporter in which a composed line of matrices is carried to and from casting position, of matrix-retaining means normally located at the receiving end of the transporter, to engage the last composed matrix of a line, the means being movable endwise in the transporter simultaneously with endwise movement of the composed line.

Feeding, Folding, Delivery:

2,031,078. SHEET SEPARATING AND FEEDING DEVICE. Georg Spiess, Leipzig, Germany. Application August 24, 1934, Serial No. 741,264. In Germany August 28, 1933. 6 Claims. (Cl. 271—27.)

1. A sheet separating and feeding device, adapted to feed from a pile of paper sheets arranged in echelon, comprising in combination: a suction member for separating and feeding the sheets from the pile; stationary means for lifting the foremost edge of the top sheet from the edge of the second sheet to form a gap between the top sheet and the rest of the pile; means for adjusting the stationary lifting means; and an air blast member for blowing air into the gap; the stationary lifting means operating independently of the pile feed.

2,032,244. AUTOMATIC SPLICING MECHANISM. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application August 11, 1931, Serial No. 556,388. 21 Claims, (Cl. 242—58.)

6. In a web supply mechanism, a web deflector, means for moving the deflector into contact with the running web, a latch adapted to hold the deflector against a bias tending to force it toward the web, and electro-responsive means actuated by a reduction in the diameter of a running roll and in running engagement therewith for releasing the latch.

2,032,339. WEB ROLL CONTROLLING MECHANISM FOR PRINTING MACHINES. Harry V. Ball, Concord, Mass., assignor to Irving Trust Company, permanent trustee for R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application December 9, 1933, Serial No. 701,618. 22 Claims. (Cl. 242—75.)

17. Web tensioning mechanism for controlling the web feed to a printing machine, comprising a roller engaging a loop in the web, means for carrying the roller and biasing same to press against the web, a movable support, friction means movable with the support and engaging the peripheral surface of a web roll, a lever connected to move the support, and a weight movable on the lever and connected to the roller carrying means.

2,033,320. SHEET FEEDER. Frank R. Belluche, Racine, Wis., assignor to Christensen Machine Company, Racine, Wis., a corporation of Wisconsin. Application October 17, 1934, Serial No. 748,632. 2 Claims. (Cl. 271—46.)

1. In a sheet feeder for printing presses and kindred machines, an endless fabric conveyer to present sheets individually to the press, a suction cup beneath the top stretch of the conveyer having a port closed by the conveyer so that the effect of vacuum within the cup is transmitted to a sheet disposed on the conveyer through the pores of the conveyer to hold the sheet down onto the conveyer, and means extending transversely of the conveyer and adjustable longitudinally to mount the suction cup.

2,033,799. WEB CHANGE MECHANISM. Henry A. Wise Wood, New York, N. Y. assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application October 7, 1930, Serial No. 486,930. Renewed June 26, 1934. 6 Claims. (Cl. 242—58.)

4. In a web changing mechanism, the combination with means for driving the fresh web roll through the axis, comprising a drum connected with the fresh web roll at its center, of a speed ratio changing mechanism connected with the drum and adjustable to compensate for the size of the fresh roll.

2,033,857. WEB REGISTERING DEVICE. Elmer L. Smith, Longmeadow, and Francis Ross Clark, Springfield, Mass., assignors to Package Machinery Company, Springfield, Mass., a corporation of Massachusetts. Application June 16, 1932, Serial No. 617,534. 11 Claims. (Cl. 271—2.6.)

1. A feeding mechanism for an indicia bearing web comprising web feed rolls, a one-way drive for the rolls, an oscillatory power means acting on the rolls through the one-way drive so that the motion of the power means in one direction produces feeding movement of the rolls, and motion in the other direction is idle, and devices actuable in accordance with the condition of register of the web during a period of rest of the web for determining the amount of feeding movement given to the rolls on the next active stroke of the power means.

Miscellaneous:

2,031,261. SEAL-FLAP GUMMING AND DRYING IN ENVELOPE MACHINES. Max Goder, Neuss, Germany, assignor to United States Envelope Company, Springfield, Mass., a corporation of Maine. Application May 6, 1935, Serial No. 20,044. In Germany May 11, 1934. 5 Claims. (Cl. 93—62.)

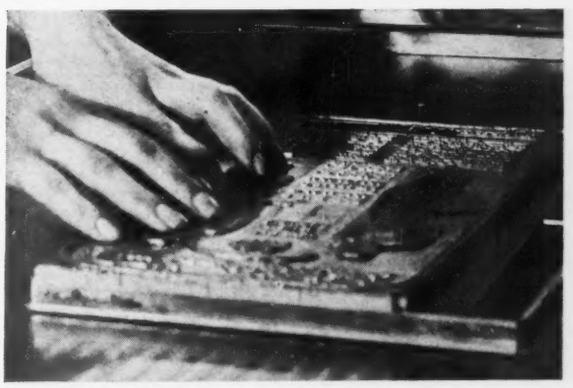
4. In an envelope machine, a gumming mechanism for the seal flaps of successively-presented envelopes, and a drying chain receiving the envelopes from the gumming mechanism, in combination with suction means associated with the gumming mechanism and

Fasten Down Cuts and Forget About Them

In the production rush, Booth's Zink Cut Cement is an important aid in sending forms to the stereotype foundry with all cuts in proper position as instructed in the advertiser's original copy. Once cemented to their bases, there is no chance for cuts to become lost in the composing room.

If not fastened to bases, many small cuts "tangle" with proof press ink rollers, in which case the type in the advertisement, the proof press cylinder tympan, the cut itself, or the ink rollers may be damaged.

Avoid these worries by using Booth's Zink Cut Cement to fasten cuts of all kinds to wood or metal base. Small patches of the cement are

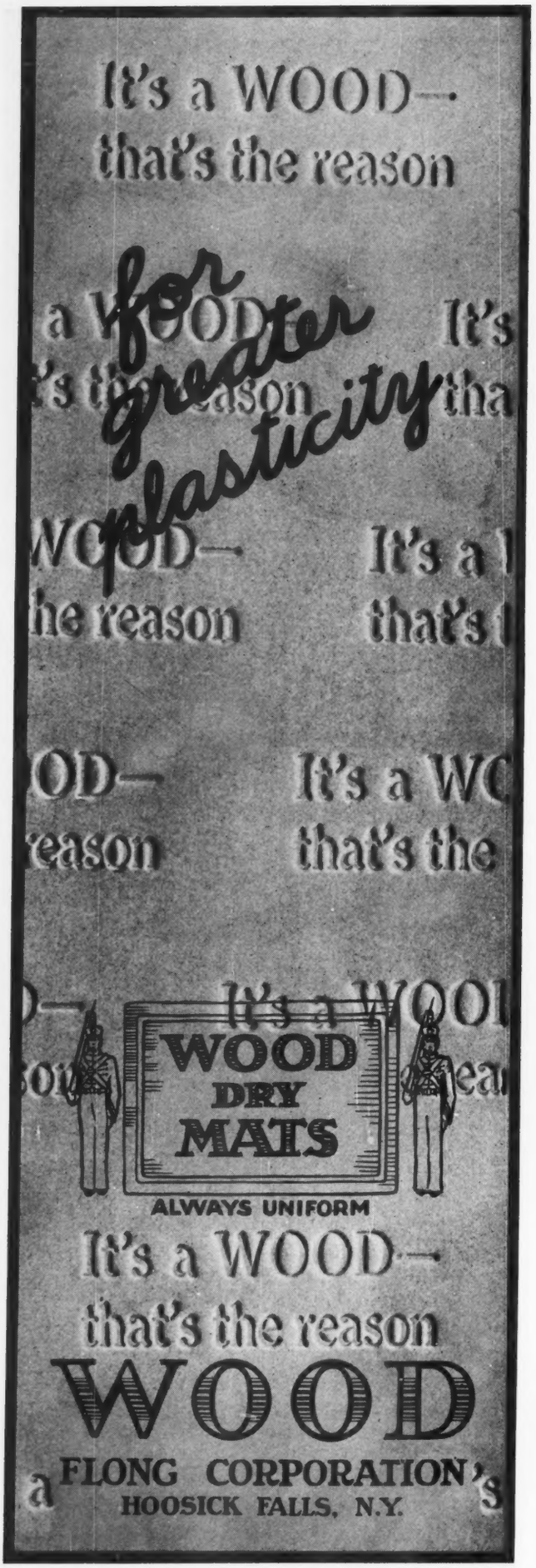


applied in several places, and with a slightly rotating motion of the fingers, the cut is pressed down firmly to spread the cement to **film thickness.** Booth's Zink Cut Cement, when used sparingly, holds cuts to bases with the strength of a tiger's paw.

Prices in the United States and Canada: 50c per large tube; $5 per dozen tubes; $4 per dozen tubes in gross lots. Stand-A-Lone Tube Holders, 2 for 25c; $1 per dozen.

The E. A. Booth Rubber Co.

364 Rockefeller Bldg. Cleveland, Ohio



operable on each seal flap, for maintaining the delivery position of each envelope on the drying chain, and suction means associated with the drying chain, and brought into action substantially coincident with the release of the seal flap by the first suction means for maintaining such delivery position while the chain travel is being reversed.

19,867. FOLDING OF ENVELOPE BLANKS AND THE LIKE. Max Goder, Neuss, Germany, assignor to United States Envelope Company, Springfield, Mass., a corporation of Maine. Original No. 1,985,273, dated December 25, 1934, Serial No. 686,273, August 22, 1933. Application for reissue May 10, 1935, Serial No. 20,835. 8 Claims. (Cl. 93—67.)

1. A machine for folding flat paper articles, comprising a pair of spaced sheet-supporting members for supporting a pile of sheets at a pair of opposed corners, and sheet-folding means for operation on certain flaps or extensions of the sheets, in combination with a plate having suction means for suctionally engaging a lowermost sheet of the pile, the plate being arranged for movement from a point below the pile of sheets to a position for delivering the lowermost sheet to the sheet-folding means, sheet-folding members pivoted to a pair of opposed edges of the plate and movable from a position in which they form a continuation of the plate at the edges into a position in which they bear against the plate and vice versa, the sheet-folding members having suction means for suctionally engaging the sheet, means operatively connected to the sheet-folding members for turning the members towards the plate during the movement of the plate away from the pile so as to fold the sheet along lines registering with the opposed edges of the plate, means for moving the plate towards and away from the pile of sheets, and controlling means for breaking the suction action on the plate reaching the delivery position.

2,031,602. CHASE. Gilbert H. Higgins, Mountain Lakes, N. J., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York; Irving Trust Company, permanent trustee. Application February 20, 1932, Serial No. 594,177. 14 Claims. (Cl. 101—17.)

1. In a device, the combination of a frame adapted to receive type forms, means adjustably secured to the frame and operatively engageable with type forms arranged therein, and other means simultaneously coacting with the frame and first mentioned means when applied to the upper surfaces for adapting the device to serve for preparing matrices.

2,032,004. PRINTER'S GAUGE PIN. Theodore W. Cleveland and Theodore W. Bunten, Weston, W. Va. Application April 2, 1935, Serial No. 14,368. 1 Claim. (Cl. 101—415.)

A guage pin comprising a base, spaced ears rising from the base, a jaw journaled between the ears and cooperable with the base for releasably securing the pin on a tympan, an ear projecting horizontally from one of the first-named ears, a handle extending from the pivoted end of the jaw in opposed relation to the base, and a locking wedge journaled between the second-named ear and the base and engageable between the base and the handle for securing the jaw in closed position, the locking wedge including an upstanding flange constituting an operating handle.

2,033,704. PRINTING PLATE BLOCK. Horace W. Hacker, La Grange, Ill. Application January 17, 1934, Serial No. 707,015. 4 Claims. (Cl. 101—382.)

1. Lumber from which printing plate bases are to be cut, the lumber comprising a plurality of wood blocks cemented together side to side, the blocks having formations embodied therein which produce a plurality of passages extending entirely through the lumber between its upper and lower surfaces and opening through opposite edges thereof.

2,031,032. MEANS FOR MIXING THE COLOR ELEMENT IMAGES IN MULTI-COLOR SCREEN PHOTOGRAPHIC PRINTING AND PROJECTION. Walter Chapman, Palmers Green, London, England, assignor to Dufaycolor Limited, London, England. Application March 16, 1933, Serial No. 661,076. In Great Britain July 7, 1932. 2 Claims. (Cl. 88—16.4.)

1. Method of obtaining copies from a three color Lumiere-Dufay screen so as to obtain a thorough mixing of the light transmitted through the master color screen consisting in displacing the color elements of the projected beam by optical means approximately one unit parallel to a given color line and then by additional optical means displacing each of the two sets or designs of elements approximately three quarters of a unit in a direction transverse relatively to the first direction of displacement.

2,033,946. APPARATUS FOR TRIMMING CYLINDERS. Wells A. Lippincott, Oak Park, Ill., assignor to Ideal Roller & Manufacturing Company, Chicago, Ill., a corporation of Illinois. Application November 15, 1934, Serial No. 753,083. 6 Claims. (Cl. 164—69.)

1. A machine for trimming a cylinder composed of rubber or like material comprising, in combination, means supporting a cylinder for rotation on its longitudinal axis, an elongated blade having a straight knife edge extending transversely of and at an angle to the cylinder with a section of the edge entering the cylinder periphery between two points disposed on the trimmed and untrimmed diameters of the cylinder, power driven means operating to advance the blade rapidly in an endwise direction, means for rotating the cylinder in a direction to carry uncut portions of the periphery toward the edge, and means for effecting relative bodily movement between the blade and the cylinder in a direction longitudinally of the latter.

2,034,154. PRINTING FURNITURE. Charles Reckeweg, Washington, D. C. Application September 9, 1935. Serial No. 39,843. 7 Claims. (Cl. 101—402.)

1. Furniture for printing comprising a bar, a rabbet in each longitudinal side wall of the bar, the lower portion of the bar being of a greater width than the upper portion.

2,034,161. ADJUSTABLE RULE MECHANISM. Emil E. Thiel, Cincinnati, Ohio, assignor to The Printing Machinery Company, Cincinnati, Ohio, a corporation of Ohio. Application June 9, 1933, Serial No. 675,101. 2 Claims. (Cl. 164—66.)

1. In the combination of a roll and a rule to be mounted on the roll and to extend in the general direction of the axis of the roll, to be readily adjustable circumferentially of the roll and the roll having a plurality of circumferential grooves therein, each of dovetail cross section, a rule mounting having means to hold a rule therein, nut members each to accurately fit the cross-section of a respective groove, and screws passing through the rule mounting, each screw being threaded into a respective nut member and adapted to wedge the nut member in the groove and thereby hold the rule mounting rigidly to the roll surface, but each nut member being adapted to freely slide around in its groove for adjustment of the rule mounting when the screw is loosened.

(Continued on Page 38)

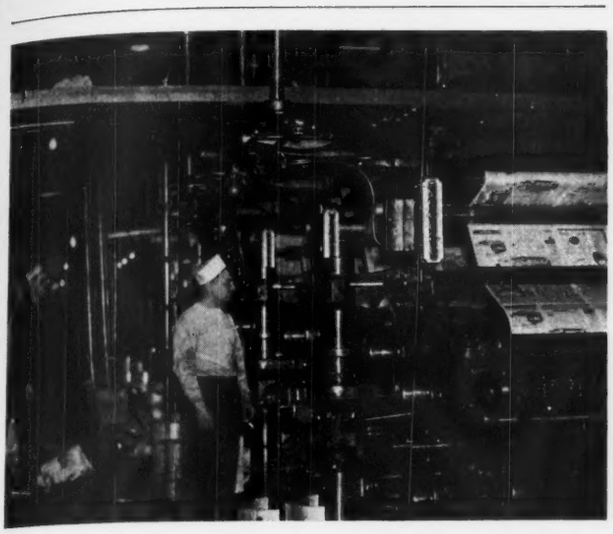
Floods

(Continued from Page 9)

covered composition, but were not damaged and were ready for use after cleaning.

Walter Ogden stated to a representative of *Printing* EQUIPMENT *Engineer* that the presses could have been operated four hours after the water had been pumped from the building, but operation was not possible because of lack of power facilities. However, press operation was started one week after water flooded the *Press* plant.

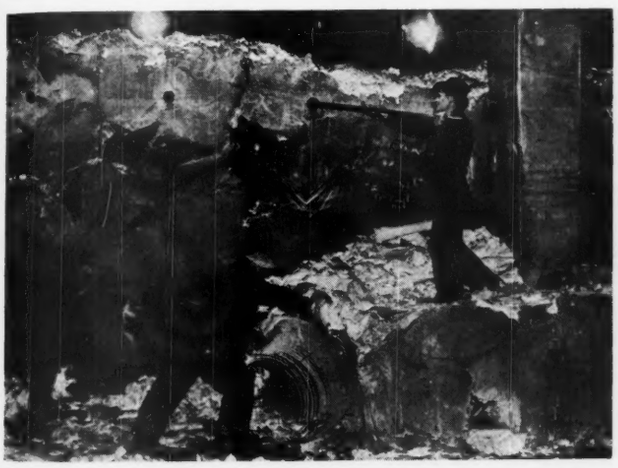
On Tuesday morning, March 31, two new motors sent from Chicago were installed on two 5-roll setups and two Goss representatives were present to see that



View of the first press to go into production after the flood in the plant of the Pittsburgh Press. *The water reached the catwalk shown in the illustration.*

all the press parts functioned properly. An engine-driven alternator which had been under water four days at the Pittsburgh Westinghouse plant, was used temporarily for power and lighting purposes.

A major problem was to recondition the press driving apparatus. This was carried out under the supervision of Mr. Parks. A crew of electricians from the Westinghouse plant was engaged and their work extended over a period of more than a week. All of the men in Mr. Sturm's department "fell to" and did a fine job in the rehabilitation work.



Here's what happened to the paper rolls in the plant of the Pittsburgh Press *at the time of the recent flood. Pick, crowbar, shovel and wheelbarrow were used by the workmen to remove the ruined paper.*

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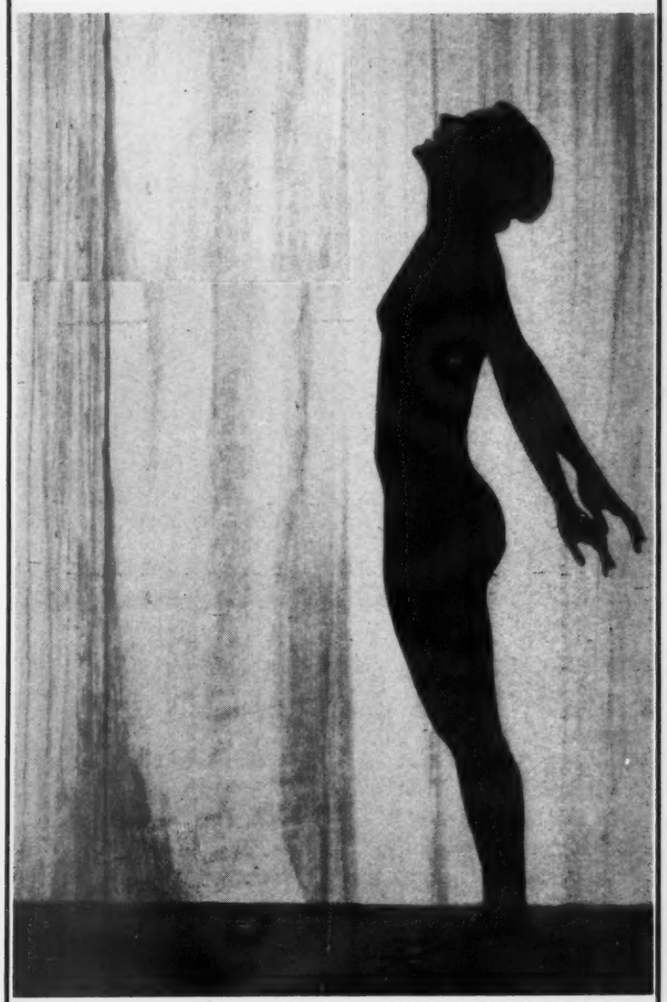
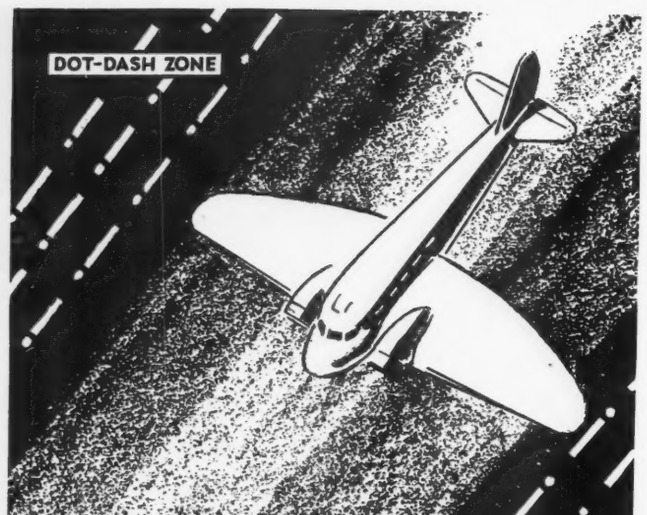
Attention Value



EXPERT photography, art work and engraving are demanded by advertisers in their bids for attention. Hundreds of dollars may be spent in obtaining a desired effect. But, a flaw in the basic engraving material—a few cents worth of zinc or copper—might ruin many dollars worth of painstaking effort. Alert engravers do not take that chance. They protect the investment of their customers by specifying metals of proved uniformity—Zomo Electric Zinc for regular work and A-Z Alloy for long direct printing runs. Leading metal distributors in the principal cities of the United States, Canada and Great Britain now carry stocks of these metals.

ZOMO ELECTRIC ZINC
A-Z ELECTRIC ALLOY



CONTROL

When today's big airliners streak across the sky on split second schedule, they are riding radio beams. The pilot is continually on the alert for that continuous hum in his earphones that means he is on his course. If he deviates to one side, the signal changes to dash, dot—dash, dot. If he veers to the other side, the signal is dot, dash—dot, dash. In either case he must bring his plane back into the radio beam to fly straight to the landing field without difficulty. This is control to a high degree.

Imperial Type Metal has worked type metal control, also, to a high degree. Monthly analysis of your metal by the Imperial Type Metal Co. working under the Imperial Plus Plan is bound to keep your type metal on the right course. It cannot vary one way or the other without Imperial knowing it and correcting it. Thus, Imperial takes full responsibility for the condition of your type metal and gives to you a service that is invaluable to any type metal user. Let Imperial control your metal. Switch today to Imperial.

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2,032,771. METHOD OF MAKING HALFTONE PLATES. Ernest Scherer, Minneapolis, Minn. Application December 12, 1934, Serial No. 757,130. 3 Claims. (Cl. 41—43.)

1. The method of etching a metal halftone plate which consists in first subjecting a plate which has been printed from a negative to a very short preliminary acid treatment for the purpose of slightly depressing the prtions surrounding the impression portions, then uniformly applying by roller action a thin film of acid-resisting fluid, heating the plate disposed face up in horizontal position for a very short interval to melt and thin the fluid and to permit the fluid to flow uniformly over the shoulders of the impression portions, then quickly chilling the plate to harden the fluid before it can flow over the bottom portions of the depressions and then subjecting the plate to a longer treatment of acid for the purpose of producing the desired printing depth.

2,033,469. WHIRLER FOR PRINTING PLATES. Harry C. Jones, New York, N. Y Application November 21, 1933, Serial No. 698,943. 15 Claims. (Cl. 91—60.)

1. In a whirler for rotating a photographic plate coated with a light sensitive solution, a revoluble disc adapted to support the plate, means for rotating the disc including a motor, a motor shaft, a pinion on the shaft, and a toothed gear adjacent the periphery of the disc and engaged by the pinion, and means for automatically controlling the speed of revolution of the disc including a centrifugal governor on the motor shaft, a brake member slidable on the shaft and surrounding the governor and pivoted thereto at one end of the governor, a fixed brake member mounted coaxially of the shaft, and means for fixing the other end of the governor in a selected position on the shaft.

Printing Presses:

2,031,727. ROTARY PRINTING MACHINE. Otto Niemand, Long Island City, N. Y. Application May 11, 1935, Serial No. 21,019. 10 Claims. (Cl. 101—38.)

1. Printing apparatus, comprising a plurality of spaced rotary cylinders, a base for supporting the cylinders, means on the base for synchronously rotating the cylinders on the base, removable supporting means intermediate the cylinders for holding a cylindrical printable body thereon, and slidable bracing means in connection with one of the cylinders for retaining one end of the cylindrical body on the supporting means in alignment thereon during the printing operation.

2,031,872. ROLLER. Andrew Morris Wightman, Chicago, Ill., assignor to Rapid Roller Company, Chicago, Ill., a corporation of Illinois. Application July 30, 1934, Serial No. 737,481. 6 Claims. (Cl. 91—67.8.)

1. An impression roller comprising a metal core, a hard rubber base layer secured thereto, a body rubber layer over the hard rubber layer, an outer surface layer of hard rubber and a cushioning layer of soft rubber between the body layer and the surface layer, all of the layers being firmly bonded together.

2,032,047. PRINTING PRESS FOR PRINTING SPOTS OF WAX CARBON ON SHEETS OF PAPER. William F. Burke, Athens, Ohio, assignor to The McBee Company, Athens, Ohio, a corporation of Ohio. Application October 20, 1934, Serial No. 749,251. 8 Claims. (Cl. 101—382.)

1. In a type bed for printing presses for printing spots of wax carbon on sheets of paper, a plurality of heating elements to heat the bed, a plurality of electric magnets mounted therein, the magnets being spaced from each other, means to supply electric current to the magnets, means to supply the current to any predetermined number of the magnets, and means to protect the winding of the magnets from the heat.

2,032,719. PRESS FOR PRINTING SPOTS OF WAX CARBON COMPOUND. George A. Rutkoskie, Athens, Ohio, assignor to The McBee Company, Athens, Ohio, a corporation of Ohio. Application May 23, 1934, Serial No. 727,022. 7 Claims. (Cl. 101—340.)

1. In a platen press having a cylindrical inking roller, an ink fountain, a positively driven ink fountain roller, a ductor roller, a traveling distributor roller, shafts for the rollers, supports for the shafts and a vertical type bed; an electrical heating element in the traveling distributor roller, flexible conductors to lead current to the element through its shaft, an electric heating element in the cylindrical inking roller, an electrical heating element in the ink fountain roller and a plurality of electrical heating elements in the type bed, the elements being connected to a source of electric current supply, means to control the temperature of the elements.

2,033,205. PRINTING CYLINDER. George W. Poppe, Brooklyn, N. Y., assignor to Equitable Paper Bag Co., Inc., Brooklyn, N. Y., a corporation of New York. Application July 18, 1934, Serial No. 735,729. 1 Claim. (Cl. 101—415.1.)

The combination with a printing cylinder having a recess in the surface thereof, of means for securing one edge of a flexible-base printing surface within the recess, a clamp for holding the other edge of the printing surface, the clamp comprising two bars between which the edge of the printing surface is inserted, screws engaging the bars for clamping the edge of the surface, one of the bars having a series of recesses in the edge thereof and screws threaded into the cylinder, the heads of the screws engaging the recesses respectively for moving the clamp edgewise in the cylinder recess, the screws also acting to secure the clamp to the cylinder.

2,033,936. TICKET PRINTING MACHINE. Morris J. Hoffman, Chicago, Ill. Application May 7, 1934, Serial No. 724,233. 11 Claims. (Cl. 101—96.)

1. In a printing machine, the combination with a group of settable type bars, each having a series of type faces thereon with notches therebetween, of an auxiliary printing bar having type faces thereon, the printing bar being adapted for insertion into aligned notches of the type bars so as to extend transversely thereof, with its type faces in the same plane as the type faces of the type bars.

Important As the Bible

You have outdone yourself. Printing EQUIPMENT Engineer *is the best publication the trade has received. The Reference Issue, as well as all numbers are as important to us as the Bible is in a church.*

Chas. A. Frederickson, Mech. Supt.,
Westchester County Publishers,
Yonkers, New York.

Pantagraph

(*Continued from Page 16*)

held as a stand-by for emergency purposes. A padding table completes the stereotype equipment on the composing room floor. After rolling and padding, mats are placed in a vertical mat chute for delivery to the stereotype foundry in the basement. In case it is necessary, the mats are padded at a second table in this department.

The stereotype foundry equipment consists of a 5-ton pot heated by a Williams Oil-O-Matic oil burner. Metal temperature in the pot is controlled automatically by a Brown High-Resistance Direct-Reading Indicating Pyrometer. A Stahi Autoformer, Pony Autoplate, Autoshaver, two flat casting boxes, two saws and trimmer and flat and curved-plate routers complete the equipment.

The Pressroom

The pressroom proper extends two floors high to the street level which permits operation of the press to be seen from the sidewalk. The *Pantagraph* uses a Goss Octuple Unit-Type Press with two folders, the paper being fed from both ends of the press. Papers are delivered from the folders to the mailing room by a Cutler-Hammer Conveyor. Arrangements have been made so that in case of emergency papers from the press may be loaded on trucks and taken by the freight elevator which leads from the pressroom to the loading platform. The pressroom is equipped with humidifiers and air conditioning means to maintain proper atmospheric conditions under constant temperature. An industrial track with dollies is used for transporting paper rolls from the storage space to the press.

The Storage

Enough storage space has been provided in the basement for about seven carloads of newsprint. The rolls of paper are received from a truck-height platform in a trucking space outside the building. A specially constructed paper chute is used for sliding rolls down to the basement level where the rolls are delivered on the receiving platform at second-tier height. From this point an elevated track with dolly is used for delivering the rolls to whatever location is required. The rolls are then inched down and stored according to width.

Reid to Move

It has been announced by Archie Reid, general manager of Wm. Reid & Co., that after May 1, the company's new address will be 2271 Clybourn Ave., Chicago, where the repair of Linotype and Intertype parts and the manufacture of Reid magazine racks will be continued.

Last Man Holds Out

You want to know what I think of Printing Equipment Engineer *Reference Book? I like everything in it and I think it is great. The monthly issues are very instructive—we look for it and pass it around. The last man to get it usually holds out.*

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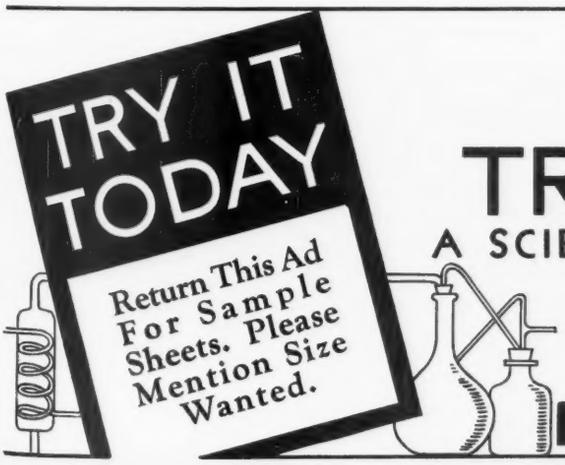

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Equipment

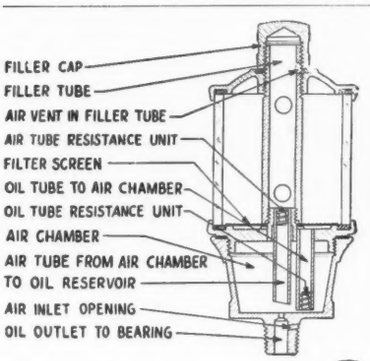
(Continued from Page 33)

The Motodrive combines features of both the Reeves Variable Speed Transmission and Vari-Speed Motor Pulley. It utilizes a V-belt running between two sets of cone-faced discs which are adjustable in diameter and mounted on parallel shafts. One shaft receives power at constant speed from the motor and the other shaft transmits power at infinitely adjustable speeds to any driven machine. Features include a V-belt; a ventilating system to maintain uniformly efficient temperatures of motor and variable speed mechanism, and a lubrication system with force-feed fittings. The variable speed shaft may be extended on either side of the unit.

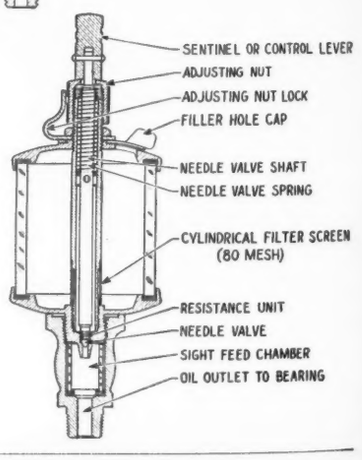
The drive is available in either horizontal or vertical design. Each design is built in four sizes which take motors from ¼ to 7½ h.p. capacities and which cover speed ratios from 2:1 through 6:1. Reduction units of helical gear type in ratios up to and including 189:1 may be incorporated in the drive. In different combinations of sizes, ratios and reduction gears, output speeds ranging from a minimum of 1.35 r.p.m. to a maximum of 3480 r.p.m. may be obtained. Units may, within certain limitations, be mounted on wall, floor or ceiling or may be mounted directly on the driven machine.

Introduces Two Oil Cups

Alemite (a division of Stewart-Warner Corp.) announces the introduction of two types of oil cups for lubricating printing machinery. Where a constant, slow flow of oil is desired, the Alemite Thermatic Oil Cup affords reliable and economical bearing protection. This cup requires no attention other than filling, and operates simply by the expansion of air due to the *normal* increase in temperature of a running bearing. A rise of just 1.8 deg. F. and the Thermatic Cup goes into action; there is



Cross-sectional diagram of Alemite's Thermatic Oil Cup.



Cross-sectional diagram of Alemite's Microflow Oil Cup.

a slow flow of oil, and the bearing gets ample lubrication to guard it against damaging friction.

The daily fluctuation of room temperatures will start an occasional flow of oil, keeping bearings of idle machinery lubricated for more than a month without refilling the cups without an overdischarge of oil. There are no moving parts. Air expansion forces the oil from the bottom of the air chamber, and that supply is replaced from the cup reservoir by gravitational action. An inlet in the base of the cup admits sufficient air to maintain pressure on the oil The air vent in the filler tube is so placed as to prevent dirt getting into the cup. And whatever foreign particles may be in the oil when put into the cup are strained out by an 80-mesh filter screen at the bottom of the reservoir.

The second new Alemite oil cup—the Microflow Cup—is adapted to bearings which require a continuous flow of oil in small, adjustable quantities.

It is fitted with a resistance unit, which permits a fine adjustment of oil flow and assures positive operation by preventing clogging. The large opening in the discharge valve assures an unhampered flow of oil—oil which has been strained of foreign particles by an 80-mesh screen. And the grooved cylindrical plug, through which the oil must pass to reach the valve, can be adjusted to such a degree that the flow of oil can be made extremely minute, yet constant.

A New Plate Finishing Machine

A 24 in. by 36 in. Rotary Head Plate Finishing Machine is the latest contribution of the engineering department of the Ostrander-Seymour Company to the printing plate making industry. The machine is designed to handle plates, after leveling, as they come from the casting pans or casting boxes. It has a stationary head, adjustable for wear and operating on roller bearings. This head is driven by a 15 h.p. slow-speed motor and a nine-strand Texrope transmission, the head revolving at 240 r.p.m. The cutter is spirally shaped and made in four sections of high-speed tool steel. An extra cutter is furnished with each machine as standard equipment.

THE NEW *Rouse* CABINET MODEL Vertical Rotary Miterer

THE importance of mitering in ad composition is readily checked by a count of the miters made in a single day.

The NEW Rouse Cabinet Model Vertical Rotary Miterer is designed to make the production of 1000 miters an hour easier, by placing at the finger tips 24 different kinds of strip materials.

The NEW Rouse Cabinet Model Vertical Rotary Miterer is essential equipment where more than ten boxes a day must be made.

Complete details, with sample borders, and approximate cutting time, will be sent at your request, without any obligation to you. Write now.

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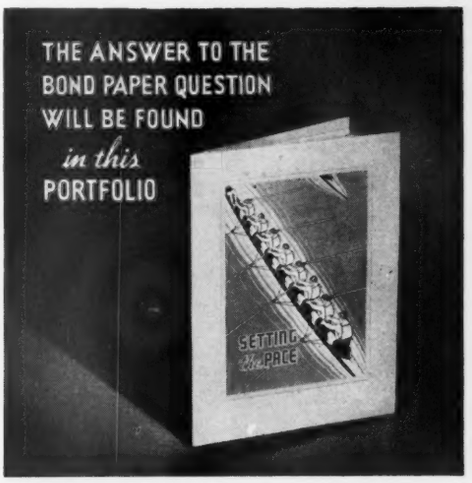

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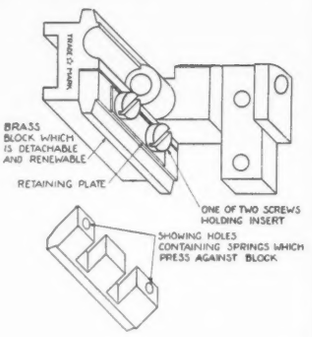
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Every machinist knows that a worn block tips the delivery slide long finger, causing it to be struck by the back aligning rail of the assembling elevator —endangering the smooth passage of matrices. The first Elevator Back Jaw is often prematurely worn by contact with this "tipped" finger. Approximately $50.00 worth of parts are jeopardized through failure to replace the long finger block in time. That's why the Everlasting Adjustable Delivery Slide Long Finger Block is worth ten times its cost.

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The cutter head revolves contra clockwise, to avoid accidental injury to the operator.

The movable bed is 24 in. by 36 in., and its entire area can be utilized. It is adjustable for varying thicknesses, and is fitted with a direct reading micrometer gauge. The bed is actuated by a one h.p. motor, through an oil drive by means of a two-strand Texrope transmission. The cutting speed of the bed can be adjusted to any travel from 0 to 68 inches per minute, and the return is made at speed of 136 in. per min. No hold-down rollers or clamps are employed. The table has side and end stops, against which the work is placed. Small plates aggregating the capacity of the bed can be handled by placing them against the stops and then against each other.

Push-button stopping and starting controls for the motors are conveniently located; the table can be fed in, stopped and reversed at any point in the travel by means of a hand lever control.

The action of the cutter head aids in taking shrinks and low spots out of the plates, and materially reduces hand finishing time and effort.

Double Roll Attachment

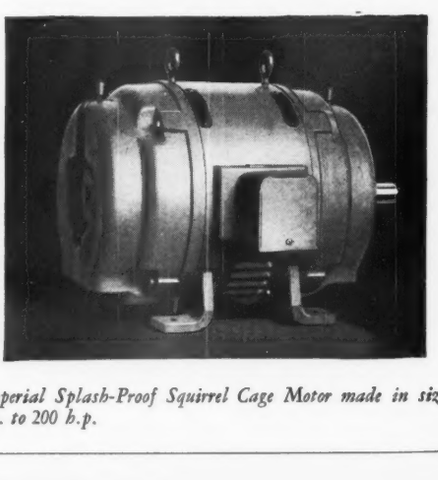
R. W. Hass has announced the new Frahass Double-Roll Attachment for Miehle Vertical and Miehle Horizontal presses. This equipment was designed by Cliff J. Frazier. The Frahass Double-Roll Attachment, it is said, may be attached or removed quickly since a change

View of new Frahass Double-Roll Attachment which may be moved from one press to another in five minutes.

from one press to another may be made in five minutes. It is claimed the Frahass attachment inks extra heavy forms by providing complete automatic double rolling, eliminates roller marks, transferring and ghosting. Complete information may be obtained by writing direct to the manufacturer, or in care of *Printing* Equipment *Engineer*.

Splash-Proof Motors

The Imperial Electric Company announces a new complete line of splash-proof, squirrel-cage motors in all ratings from ½ h.p. to 200 h.p. for constant and



View of Imperial Splash-Proof Squirrel Cage Motor made in sizes ranging from ½ h.p. to 200 h.p.

multi-speed, continuous or intermittent duty in all voltages and cycles, for any torque and starting current.

The construction provides protection to the inner parts from splash or spray and yet permits proper ventilation by small openings in the bottom of the end brackets for the air in-take and louvres in the frame cover underneath the motor for the air exit.

Bearings are of anti-friction ball bearing type mounted in specially enclosed cartridge and are sealed against dirt and moisture. Rotor may be removed from machine without opening cartridge enclosure.

Cabinet Model Miterer

The new Rouse Cabinet Model Vertical Rotary Miterer has been developed to save steps for the operator by bringing within arm's reach 24 different faces of strip material which can be stored in suitable compartments in the cabinet below the work top. The new Rouse cabinet can be supplied for Rouse Vertical Rotary Miterers of the pedestal type already in use.

The Rouse Vertical Rotary Miterer will mitre strips 6 points long, or 84 picas long. Its speed is maintained in cutting a number of rules of the same length or several different lengths. Setting of gauges is easy. A positive point gauge, it is claimed, insures difinite accuracy. The operator can see exactly where the cut is being made without any danger of injury from the high-speed steel cutting wheel which performs the mitering operation, since the cutting wheel is guarded.

New Cabinet Model Rouse Vertical Rotary Mitering Machine.

The Rouse Vertical Rotary Miterer will cut metal or brass strips up to 24 points in thickness. Small pieces may be mitered perfectly, it is also claimed. Complete information may be obtained direct from the manufacturers, H. B. Rouse & Company, or through *Printing* EQUIPMENT *Engineer.*

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Dryer Eliminator for Automatic Platen Presses

A new automatic Craig gas heater, said to speed up drying by 50% and to eliminate the static problem, has been introduced recently for use on C. & P. Craftsman and Rice Units, Kluge, Miller and other platen presses with automatic feed. The new heater is being distributed by American Type Founders, Elizabeth, N. J.

View of Craig Automatic Gas Heater for Several Makes of Platen Presses.

Difficulties arising from static such as feeder and folder troubles and the necessity for hand jogging are completely eliminated, it is claimed, with a consequent speeding up of trimming and folding time and reduction of spoilage and hand work. These improvements are obtained without danger of sheet curling, ink crystallization or register hazards, according to the announcement.

The unit is said to provide efficient drying action at a low cost per hour for gas. A fine-adjustment carburetor permits close regulation of the heater for artificial, natural or "canned" gas supply. Automatic start and shut-off controls provide safe operation.

• *Technical Literature*

Readers of *Printing* EQUIPMENT *Engineer* who are interested, may secure any of the Books, Catalogs or Bulletins listed below by checking the literature desired in the square opposite the title. Mark carefully only that literature which you wish to receive. Fill out the coupon and send it to us. The literature will be forwarded gratis except where noted.

☐ *Parts and Supplies Price List*—For application to Linotype Machines for replacement purposes. Illustrated. Contains 32 pages and cover.

☐ *Extra Profits From Your Pressroom*—Booklet in which are brought together the salient features which affect lock-up, makeready and register in an endeavor to prove that antiquated measures have outlived their usefulness.

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☐ *Splash-Proof, Squirrel Cage Motors*—Bulletin on new line of motors for use when there are falling or splashing liquids.

☐ *What Does Vibration Cost the Printer?*—Bulletin sets forth reasons for vibration isolation of printing machinery.

☐ *Illustrated Bulletin*—"Important News for Those Who Do Work From High Speed Job Presses." Describes range of work which can be done on new folding machine.

☐ *How to Lessen Vibration*—Liberally illustrated booklet giving considerable technical information about mounting machinery on vibration isolation material.

☐ *Illustrated Bulletin*—Describes various and newly-designed parts for replacement purposes on Linotype machines.

☐ *Medium, Bold and Extra Bold Benton*—Twelve-page booklet shows various sizes of Intertype matrix faces. Printed in red and black.

☐ *Norma-Hoffman Cartridge Precision Ball Bearings*—Eight-page illustrated bulletin in which is described a new principle in ball bearing construction with increased grease capacity.

☐ *Bi-Color Proving Process*—Eight-page bulletin explaining and demonstrating process for checking corrections in revised proofs.

☐ *Charm and Distinction*—Folder showing specimens of Egmout Series type for hand composition.

☐ *Vulcan Gelastic Inking Roller*—Folder describes roller and claims made for it.

☐ *Composing Machine Parts Rebuild Folder*—Illustrates parts for composing machines and describes work done to restore damaged machine parts, including rebuilding of mold disks.

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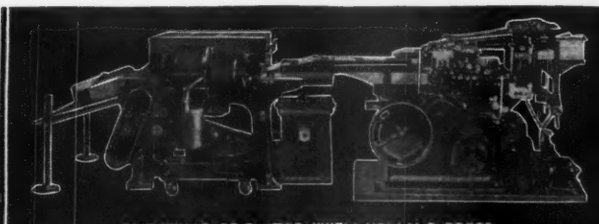
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Low Quad

(*Continued from Page 10*)

they are released easily. Another set of jaws may then be hooked over the bearings *B* and swung down until they snap into register with the retaining bolt which locates and secures them firmly in place.

To clear the way for swinging the right-hand vise jaw upward, the first elevator back jaw support *C*, Fig. 2, is hinged to the vise cap. A cam block *D* serves to throw the support down to normal position should

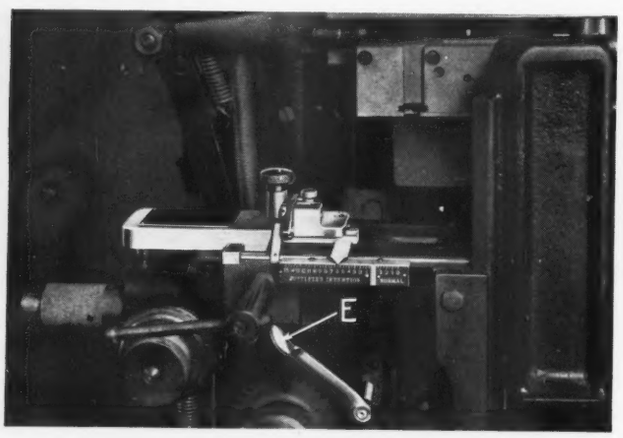

Fig. 3.—Here is shown the control bar E *for switching the Intertype quadder from normal-line casting and quadding action to automatic "justified indention" quadding. By means of this device it is possible to indent type lines equal amounts on both sides automatically.*

the operator fail to throw it down before the mold advances to casting position.

The feature of automatic "justified indention" quadding adds materially to the flexibility and usefulness of the Intertype universal quadding device. When casting to low-quad depth, especially when it is necessary to run the composition around cuts, this feature makes it possible to quad automatically to any desired constant margin or indention.

In Fig. 3 is shown the control lever *E* for switching the quadder from normal-line casting and quadding action to automatic "justified indention" quadding.

When the lever *E* is swung to the right the machine casts in the regular manner, *i.e.*, full lines justify as usual to column width and whenever short lines are sent in, with or without spacebands, they are quadded out or centered automatically. When the lever *E* is swung to the left for justified indention quadding, all short lines, of course, will contain spacebands since the purpose then is to justify such lines automatically to a predetermined length within the width of the column. The amount of indention desired is obtained by setting the pointer *F* to the corresponding mark on the scale, the range of which allows indentions by half-pica steps up to and including 15 picas.

Heitkamp With ATF

Fred B. Heitkamp has been appointed Assistant General Sales Manager, American Type Founders Sales Corporation, Elizabeth, N. J. Mr. Heitkamp will have a newly created position with ATF in planning sales activities of long range development. Harry W. Alexander, General Sales Manager, continues in charge of all sales operations for the entire Company.

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